



BRITAIN

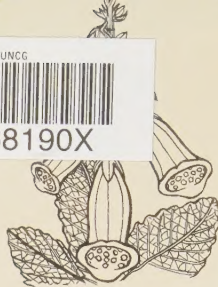
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Traveller's Joy



Foxglove



Water Crowfoot



Yellow Balm



Sweet Violet



Marsh Mallow



Briar Rose



Common Flax



Field Scabious



Ox-eye Daisy



Cat's-foot

WILD FLOWERS of the British Isles



Bluebell



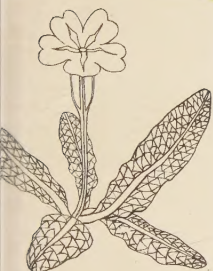
Harebell



Ling



Moneywort



Primrose



Pimpernel



Lesser Periwinkle



Bee Orchis



Fritillary



Sea Pink



Cowslip



Meadow Crane's-bill

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INTRODUCTION

BRITAIN: AN OFFICIAL HANDBOOK, 1960, is the eleventh in the series prepared and extensively revised each year by the Reference Division of the Central Office of Information with the co-operation of other Government departments and of many national organisations.

The handbook, which is the mainstay of the reference facilities provided by the British Information Services in many countries, was at first only available overseas in a limited free edition. In 1954 it was placed on sale throughout the world and it has since become widely known as an established work of reference.

BRITAIN: AN OFFICIAL HANDBOOK, 1960, which covers events up to September 1959, gives, like its predecessors, a factual account of the administration and the national economy of the United Kingdom. It describes the activities of many of the national institutions, both official and unofficial, and shows the part played by the Government in the life of the community.

The handbook does not claim to be comprehensive, nor does it attempt to cover Britain's participation in Commonwealth or world affairs. The factual and statistical information it contains is compiled from official and other authoritative sources, and, while most sections of the book relate to the United Kingdom as a whole, facts and figures for England, Wales, Scotland, and Northern Ireland are also given separately when these are available.

The arrangement of chapters in this edition follows that of previous years. A new feature, however, is the addition of a chapter on sport, covering briefly the principal sports and games practised in Britain and the various governing bodies concerned.

Readers who require more detailed information on the United Kingdom should consult the *Annual Abstract of Statistics* and the *Monthly Digest of Statistics*, issued by the Central Statistical Office, and also other Government publications and standard works of reference, some of which are listed in the bibliography at the end of the handbook. Readers are asked to note that the Central Office of Information reference documents listed in the bibliography as free and marked with an asterisk are available free of charge only at United Kingdom Information Offices overseas; they can, however, be obtained in the United Kingdom from the Reference Division, Central Office of Information, on payment of a small charge.

REFERENCE DIVISION

CENTRAL OFFICE OF INFORMATION, LONDON

September 1959

I. THE LAND AND THE PEOPLE

THE PHYSICAL BACKGROUND

The British Isles form a group lying off the north-west coast of Europe with a total area of about 121,600 square miles. The largest islands are Great Britain proper (comprising the mainlands of England, Wales and Scotland) and Ireland (comprising Northern Ireland and the Irish Republic). Off the southern coast of England is the Isle of Wight and off the extreme south-west are the Isles of Scilly; off North Wales is Anglesey. Western Scotland is fringed by numerous islands and to the far north are the important groups of the Orkneys and Shetlands. All these form administrative counties or parts of counties of the mainland, but the Isle of Man in the Irish Sea and the Channel Islands between Great Britain and France have a large measure of administrative autonomy and are not part of England, Wales or Scotland.

England (excluding the county of Monmouth on the Welsh border), has a total area (including inland water) of 50,327 square miles and is divided into 40 geographical or 49 administrative counties; Wales (including Monmouthshire), with a total area of 8,017 square miles, has 13 counties; Scotland, including its 186 inhabited islands, has a total area of 30,411 square miles and is divided into 33 counties; and Northern Ireland, consisting of six counties, has a total area of 5,459 square miles. Together, these countries constitute the United Kingdom of Great Britain and Northern Ireland with a total area of 94,214 square miles. The total land area of the United Kingdom (excluding inland water) is 93,018 square miles: England, 50,051; Wales and Monmouthshire, 7,966; Scotland, 29,795; and Northern Ireland, 5,206 square miles.

Care must be taken when studying British statistics to note whether they refer to England as defined above, to England and Wales (considered together for many administrative and other purposes), to Great Britain, which comprises England, Wales and Scotland, or to the United Kingdom as a whole. The position is further complicated by the fact that the county of Monmouth is sometimes included with England. United Kingdom statistics and other data sometimes include the Isle of Man, 227 square miles, and the Channel Islands, 75 square miles, which are strictly not part of the United Kingdom, but are dependencies of the Crown. Since southern Ireland became independent, official statistics do not normally refer to the British Isles as a whole.

The latitude of 50° North cuts across the southernmost part of the British mainland (the Lizard Peninsula) and latitude 60° North passes through the Shetland Islands. The northernmost point of the Scottish mainland, Dunnet Head, near John o' Groats, is in latitude 58° 40'. The prime meridian of 0° passes through the old Observatory of Greenwich (London), while the easternmost point of England is nearly 1° 45' East and the westernmost point of Ireland is approximately 10° 30' West. It is just under 600 miles in a straight line from the south coast of Britain to the extreme north and rather over 300 miles across in the widest part. Owing to the numerous bays and inlets no point in the British Isles is as much as 75 miles from tidal water.

The seas surrounding the British Isles are everywhere shallow—usually less than 50 fathoms (300 feet)—because the islands lie on the continental shelf. To the north-west along the edge of the shelf the sea floor plunges abruptly from 600 feet to 3,000 feet. These shallow waters are important because they provide excellent fishing grounds as well as breeding grounds for the fish. The North Atlantic Current, the drift of warm water which reaches the islands from across the Atlantic, spreads out over the shelf and its ameliorating effect on the air is thus magnified. The effect of tidal movement is also increased by the shallowness of the water.

Geology and Topography

Despite their small area, the British Isles contain rocks of all the main geological periods. In Great Britain the newer rocks, which are less resistant to weather, and have thus been worn down to form low land, lie to the south and east, and the island can therefore be divided roughly into two main regions, Lowland Britain and Highland Britain.

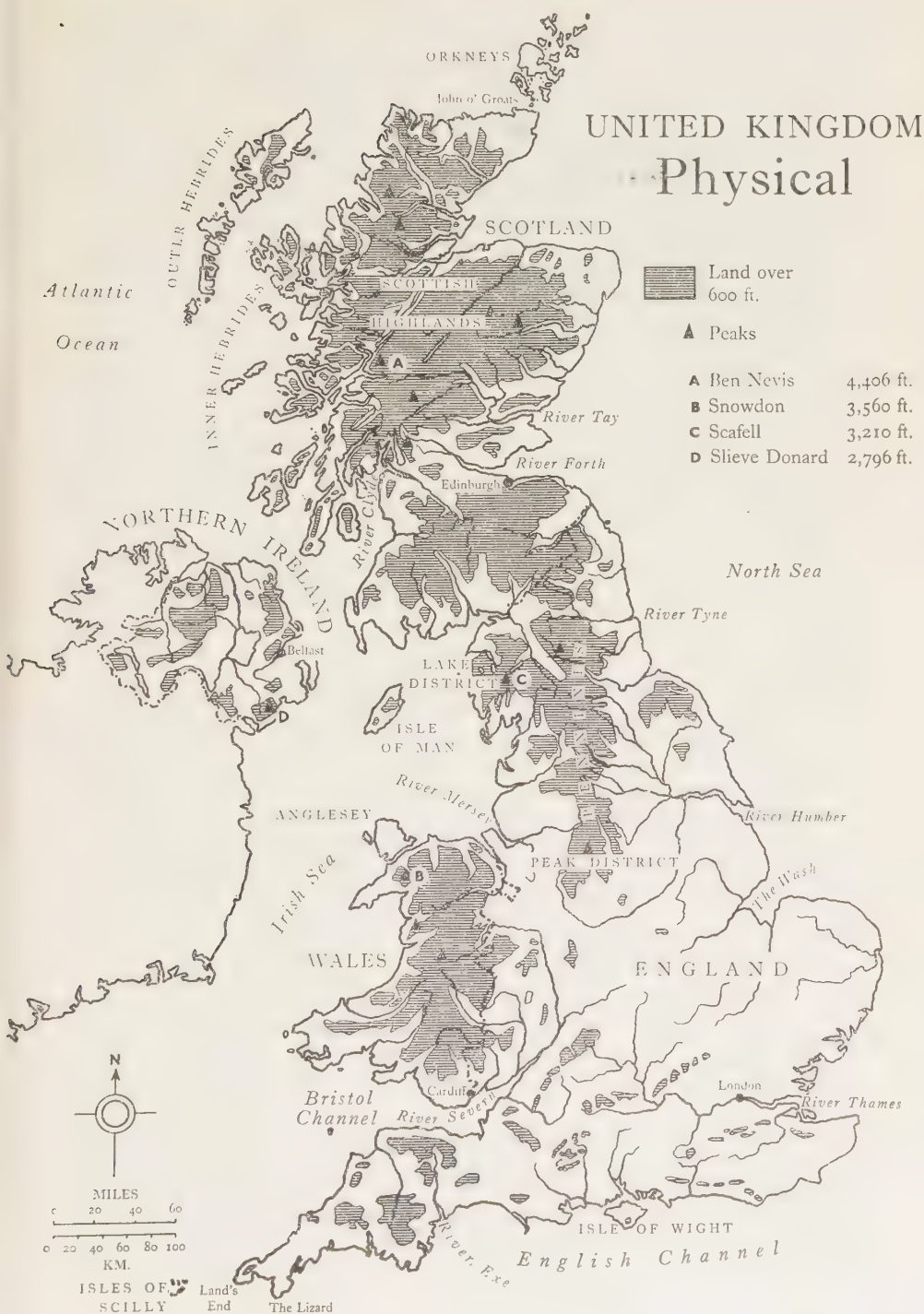
In Lowland Britain the newer and softer rocks of southern and eastern England have been eroded into a rich plain, more often rolling than flat and rising to chalk and limestone hills, but hardly ever reaching a thousand feet above sea level. The boundaries of this region run roughly from the mouth of the Tyne in the north-east of England to the mouth of the Exe in the south-west.

Highland Britain comprises the whole of Scotland (including the hills and moors of southern Scotland as well as the mountains of the Scottish Highlands, which extend from the Forth-Clyde valley to the extreme north-west), the Lake District in north-west England, the broad central upland known as the Pennines, almost the whole of Wales, and the south-western peninsula of England coinciding approximately with the counties of Devon and Cornwall. Highland Britain contains all the mountainous parts¹ of Great Britain and extensive uplands lying above one thousand feet. This high ground, however, is not continuous but is interspersed with valleys and plains. Geologically the mountains and hills consist mainly of outcrops of very old rocks (archaeon and palaeozoic), while the top strata in the valleys and plains are mainly more recent (carboniferous age) and similar to those in the northern and western parts of Lowland Britain.

These carboniferous strata are rich in minerals and include the coal measures which have been the foundation of Britain's industrial expansion. The outcrops and shallow seams of coal which have now largely been exhausted were found on the edge of the plains and up the valleys leading to the high land. Most of the present deep coal workings underlie the fertile lowlands.

Towards the end of Britain's long geological history, when the ancestors of present-day man had already settled in the country, came the great Ice Age, and at one period or another during this time the whole of Britain north of a line joining the river Thames and the Bristol Channel was covered by ice caps and ice sheets. The ice naturally accumulated on the higher ground and swept from the mountains of Scotland, northern England and Wales any loose rock or soil which had previously been formed, so that, when the ice eventually disappeared, the hills stood out as barren rocky areas, while a thick mantle of glacial debris—boulders, boulder-clay, sands and gravels—lay distributed widely over the lower ground. The ice had blocked up previous drainage channels and left large lakes, which have since gradually dried up, leaving deposits of sand, silt and mud, often affording soils of great fertility.

¹ The highest peaks are: in Scotland, Ben Nevis, 4,406 feet; in Wales, Snowdon, 3,560 feet; and in England, Scafell Pike (in the Lake District, Cumberland), 3,210 feet. The highest peak in Northern Ireland is Slieve Donard, 2,796 feet.



In Ireland, where the solid rocks are covered deeply by the debris left by the ice sheets, the great central plain has large boggy areas, due to interruption of the previous natural drainage. The mountains and hill masses of Ireland are irregularly placed around central lowlands; in the higher parts the moorland vegetation resembles that of the higher parts of Highland Britain.

Britain's complex geology is one of the main reasons for its rich variety of scenery and the stimulating contrasts found within short distances, particularly on the coasts. The ancient rocks of Highland Britain often reach the coast in towering cliffs; elsewhere the sea may penetrate in deep lochs, as along much of the west coast of Scotland. Bold outstanding headlands are notable features in other parts of the varied coastline: the granite cliffs of Land's End; the limestone masses and slates of the Pembrokeshire coast in South Wales; the red sandstone of St. Bees Head on the Cumberland coast; and the vertically jointed lavas of Skye and the island of Staffa in the Inner Hebrides. Even around Lowland Britain there are striking contrasts. In some parts the soft, white limestone—the chalk—forms the world-famous white cliffs of Dover or the Needles off the Isle of Wight; while other parts of the south and south-east coastline have beaches of sand or shingle. The eastern coast of England between the Humber and the Thames estuary is for the most part low-lying, and for hundreds of years some stretches of it have been protected against the sea by embankments. These have occasionally been breached, as in the flood disaster of January 1953, which was caused by the abnormal concurrence of violent gales and exceptionally high tides.

The marked tidal movement around the British Isles sweeps away much of the sand and mud brought down by the rivers and makes the estuaries of the short British rivers¹ valuable as natural harbours.

Climates

Britain has a temperate and equable climate. It lies in middle latitudes to the north-west of the great continental land mass of Eurasia, but as the prevailing winds are south-westerly the climate is largely determined by that of the eastern Atlantic, although occasionally during the winter months easterly winds may bring a cold, dry, continental type of weather which, once established, may persist for many days or even weeks. The weather from day to day is controlled mainly by a succession of depressions from the Atlantic which, moving in a generally easterly or north-easterly direction, pass over or near the British Isles. During the summer months the Azores high pressure system usually extends its influence north-eastwards towards north-west Europe, and the depressions take a more northerly course, often passing entirely to the north of the British Isles.

Winds. In Britain, south-westerly winds are the most frequent, and those from the south-east and east the least; easterly winds occur about half as often as south-westerly ones although they are appreciably more frequent in the spring than at any other time of the year. In hilly country, wind direction may differ markedly from the general direction owing to local topography. Winds are generally stronger in the north than in the south of the British Isles, stronger on the coasts than inland, and stronger in the west than in the east. The strongest winds usually occur in the winter; the average speed at Lerwick, Shetland Islands, varies from about 22 m.p.h. in January to about 14 m.p.h. in August, while at Kew Observatory, on the western outskirts of London, the average speed varies from about 10 m.p.h. in January to about 7 m.p.h. in August. The stormiest region of the British Isles is

¹ The longest rivers in England—the Severn and the Thames—are only 210 and 200 miles long respectively.

along the north-west coast with over 30 gales a year; south-east England and the east Midlands are the least stormy, with gales occurring on about 2 days a year inland and on some 15 to 20 days on the Channel coast.

Temperature. Near sea level the mean annual temperature ranges from 47° F. in the Hebrides to 52° F. in the extreme south-west of England; it is slightly lower in the eastern part of the country in the same latitude. The mean monthly temperature in the extreme north, at Lerwick (Shetlands); ranges from 39° F. during the winter (December, January and February) to 53° F. during the summer (June, July and August): the corresponding figures for Jersey (Channel Islands), in the extreme south, are 43° F. and 63° F. The average range of temperature between winter and summer varies from 15° F. to 23° F., being greatest inland in the eastern part of the country. During a normal summer, the temperature occasionally rises above 80° F. in the south, but temperatures of 90° F. and above are infrequent. Extreme minimum temperatures depend to a large extent on local conditions, but 20° F. may occur on a still, clear winter's night, 10° F. is rare, and 0° F. or below has been recorded only during exceptionally severe winter periods.

Rainfall. The British Isles as a whole have an annual rainfall of over 40 inches, while England alone has about 34 inches. The geographical distribution of annual rainfall is largely governed by topography and exposure to the Atlantic, the mountainous areas of the west and north having far more rain than the plains of the south and east. Between 150 and 200 inches of rain fall on the summits of Snowdon and Ben Nevis during the average year, whereas some places in the south-east of England record less than 20 inches. Rain is fairly well distributed throughout the year, but, on the average, March to June are the driest months and October to January the wettest, the former period of four months having about 60 per cent of the rainfall of the latter. A period of as long as three weeks without rain is exceptional, and is usually confined to limited areas. The spring and summer of 1959, however, were unusually dry and sunny, and many areas, especially in southern, central and eastern England, enjoyed a number of rainless periods of three weeks or more.

Sunshine. The distribution of sunshine over the British Isles shows a general decrease from south to north, a decrease from the coast inland, and a decrease with altitude. During May, June and July—the months of longest daylight—the mean daily duration of sunshine varies from five and a half hours in western Scotland to seven and a half hours in the extreme south-east of England; during the months of shortest daylight—November, December and January—sunshine is at a minimum, with an average of half an hour a day in the Highlands of Scotland and in the Peak District (Derbyshire) and two hours a day on the south coast of England.

Soil and Vegetation

Many parts of the surface of Highland Britain have only thin, poor soils, with the result that large stretches of moorland are found over the Highlands of Scotland, the Pennines, the Lake District, the mountains of Wales and in parts of north-east and south-west England. In most areas the farmer has cultivated only the valley lands and the plains where soils are deeper and richer; villages and towns are often separated by uplands with few if any habitations.

With the exception of a few patches of poor soil or rocky land, almost the whole of Lowland Britain has been cultivated, and farmland covers the area except where there are urban and industrial settlements. Elaborate land drainage systems have been developed through the centuries to bring under cultivation the fertile soil of the low-lying fenland of Lincolnshire and similar areas in East Anglia.

With its mild climate and varied soils, Britain has a diverse pattern of natural vegetation. When the islands were first settled, oak forest probably covered the greater part of the lowland, giving place to extensive marshlands, thin forests of Scots pine on higher or sandy ground and perhaps some open moorland. In the course of the centuries nearly all the forests have been cleared and woodlands now occupy only about 7 per cent of the surface of the country. Midland Britain appears to be well wooded because of the numerous hedgerows and isolated trees. The greatest density of woodland occurs in the north and east of Scotland, in some parts of south-east England and in Monmouthshire on the Welsh border. The most common trees are oak, beech, ash and elm and, in Scotland, pine and birch.

There are various types of wild vegetation, including the natural flora of woods, fens and marshes, foreshores and cliffs, chalk downs and the higher slopes of mountains; the most widespread is that of the hilly moorland country, which consists mainly of heather, grasses, gorse and bracken, with cotton grass in the wetter parts. Most of Britain, however, is agricultural land, of which about a third is arable and the rest pasture and meadow, a varied semi-natural vegetation composed of indigenous grasses and flowering plants.

Farming land is divided into fields by hedges or stone walls and, especially in the mixed farms which cover most of the country, presents a pattern of contrasting colour. The cool temperate climate of Britain and the even distribution of rainfall ensure a long growing season; streams rarely dry up, grassland is green throughout the year and full of wild flowers from spring to autumn; there is scarcely a month in which some flowers may not be found in hedgerows and sheltered woodland glades.

Fauna

The fauna of the British Isles is, in general, similar to that of north-western Europe, though there are fewer species. Some of the larger mammals, including the wolf, the bear, the boar and the Irish elk, have become extinct; but red deer, protected for sporting reasons, flourish in the Scottish Highlands and on Exmoor in the counties of Devon and Somerset, roe deer are found in Scotland and in the wooded areas of southern England, and fallow deer (which are not indigenous) have been introduced into parks and are wild in some districts. The badger, a nocturnal animal, is rarely seen; there are foxes in most rural areas, and otters are found along many rivers and streams. Both common and grey seals may be seen on various parts of the coast, though not usually in the same localities. Smaller mammals include mice, rats, voles, shrews, hedgehogs, moles, squirrels (the imported grey more numerous than the native red), hares, rabbits (a serious farming pest before their decimation by myxomatosis in the years 1954 and 1955), weasels and stoats.

There are about 430 species of birds, including many song-birds. About 230 species are resident and the rest are regular visitors to Britain. The chaffinch and the blackbird are probably the most numerous and are widely and evenly distributed, but sparrows usually predominate near houses, and huge flocks of starlings, which gather at certain seasons, sometimes congregate in London and other large towns. In general, the number of small birds has been on the increase for several decades owing to their success in adapting themselves to a man-made environment and also to their more considerate treatment by the public. The number of large birds, on the other hand, has tended to decline, except for game birds which are specially preserved, such as pheasants and partridges, and the red grouse which is found in moorland areas.

The many species of gulls and other sea-birds which nest round the coast often fly far inland in search of food or shelter in rough weather. The drainage and reclamation of marsh lands have diminished the natural habitat of duck, geese and

other aquatic birds. Such birds, however, now frequent reservoirs, gravel pits and sewage farms in addition to the nature reserves and bird sanctuaries which the Government is establishing on an increasing scale. Many of the rarer species of birds are protected by law.

Reptiles and amphibians are few. The former are represented by three species of snakes, of which only the adder is venomous, and three species of lizards, including the snake-like slow-worm. The amphibians are represented by three species of newts and five species of frogs and toads. Of these, only one species of newt and the common viviparous lizard are indigenous; the other species of reptiles and amphibians that are now firmly established came to Britain from Europe. There are no snakes in Ireland.

River and lake fish include salmon, trout, sea-trout, perch, roach, dace, grayling and pike.

There are more than 21,000 different kinds of insects, most of them small, in the British Isles. Among the largest are the rare swallowtail butterfly (3 to 4 inches) and the stag beetle ($2\frac{1}{2}$ inches). The insect fauna in Britain is less varied than that of continental Europe and lacks a number of common European species. With modern methods of pest control, extensive insect damage to crops or timber and serious outbreaks of diseases commonly spread by insect vectors are exceptional in Britain.

THE DEMOGRAPHIC BACKGROUND

The people who now inhabit the British Isles are descended mainly from the people who inhabited them nearly nine centuries ago. The last of a long succession of invaders and colonisers from Scandinavia and the continent of Europe were the Normans, a branch of the Norsemen or Scandinavian Vikings who, after settling in northern France, intermarrying with the French, and assimilating the French language and customs, crossed to England and conquered it in 1066.

It is neither possible nor suitable to attempt in this chapter to estimate the relative importance of various early peoples—pre-Celts, Celts, Romans, Anglo-Saxons and the Norsemen, including the Danes—in the ancestry of the present English, Scots, Welsh and Irish. It is significant, however, that over most of England and the Lowlands of Scotland the language which soon came to predominate was English, mainly a marriage of Anglo-Saxon and Norman-French, while the use of Celtic languages persisted in Wales, Cornwall, the Isle of Man, the Highlands of Scotland and in Ireland (see p. 18).

The available records do not permit of any precise estimates of the size of population or of the extent or direction of population movement until the beginning of the nineteenth century. It is believed, however, that at the end of the eleventh century the population of Great Britain was about two million, while at the end of the seventeenth century a reasonable contemporary estimate put the population of England and Wales at $5\frac{1}{2}$ million and that of Scotland at about one million. The main factor in this gradual growth of population was a slow natural increase, the rate of which was retarded in Britain, as in all countries before the development of medical science, by high death rates and, in particular, by very high infant and maternal mortality. Immigration from the continent of Europe was an influence at certain times, for example, that of Flemish weavers in the fourteenth and fifteenth centuries.

From the beginning of the nineteenth century, information about the British people—their number, sex, age, geographical distribution, births, deaths, marriages, occupations, language and family structure—is relatively plentiful and reliable.

Most of it is derived from two main sources: the regular flow of vital statistics, i.e. statistical information based on statutory registration of births, marriages and deaths, and the periodic census of population which gives a national snapshot at a particular moment of time.

The Compilation of Vital Statistics

The compilation of complete records of births, marriages and deaths is carried out by registrars of births and deaths, some of whom also act as registrars of marriages. In England and Wales, there are about five hundred superintendent registrars in charge of registration districts and about twelve hundred registrars in charge of sub-districts. Registrars and superintendent registrars are appointed by the county, county borough and metropolitan borough councils but they act under the instruction of the Registrar General for England and Wales, who is in charge of a central Government department, the General Register Office, concerned with regulating the registration of births, deaths and marriages, with planning and carrying out population censuses, and with the compilation and analysis of population and vital statistics. There are corresponding authorities¹ and similar arrangements (differing only in detail) in Scotland, Northern Ireland, the Channel Islands and the Isle of Man.

In England and Wales, there is a legal obligation for births, deaths and marriages to be registered. The responsibility for giving information to a local registrar about a birth is placed first on the parents of the child (the mother where the child is illegitimate), then on the occupier of the house and any person present at the birth, on the person in charge of the child or on any person finding a new-born child. Similarly, information for the registration of a death must be given by a relative present at the death or in attendance during the last illness or, in their absence, by any other relative residing or being in the sub-district where the death occurred, by the occupier or an inmate of the house or by any person finding or taking charge of the body or arranging for its disposal. The doctor who attended the deceased during his last illness must issue a certificate giving the cause of death and deliver it at once to the registrar. Deaths of persons not receiving medical attention, deaths the cause of which is unknown and unnatural, and accidental or violent deaths must be reported to a coroner (see p. 85).

Marriages are registered immediately after the ceremony. In general, marriages according to religious rites are entered in registers held by the officiating clergyman or some other person appointed by the religious body concerned. Some religious marriages, and all civil marriages (which are solemnised in superintendent registrars' offices) are attended and registered by registrars of marriages.

Certified copies of all entries of births, deaths and marriages are sent quarterly to the General Register Office.

In Scotland, there are no superintendent registrars but for each of nearly 1,000 registration districts there is a registrar of births, deaths and marriages. Some 300 of these registrars may conduct civil marriages in their offices. Duplicate registers are transmitted annually to the Registrar for Scotland after inspection by district examiners. In the 184 registration districts of Northern Ireland, only live births are registered (whereas both live and still births are registered in Great Britain) and certain supplementary information (collected in Great Britain primarily for fertility studies) is not required. Roman Catholic marriages in Northern Ireland

¹ The various authorities are: the General Register Office, Somerset House, London; the General Registry Office, Edinburgh; the General Register Division of the Ministry of Finance of the Government of Northern Ireland; the Governments of Jersey, of Guernsey and its associated islands, and of the Isle of Man.

are registered on the authority of a certificate completed at the time of the ceremony, instead of being recorded in a bound register immediately the ceremony is over.

The Census

Censuses of the people of Great Britain were taken regularly every ten years from 1801 to 1931. There was no census between 1931 and 1951, but a count of the population by age and sex was a by-product of the national registration which was instituted at the outbreak of the second world war in September 1939.

Censuses were taken on 8th April, 1951, by the appropriate authorities in the United Kingdom, the islands of the British seas and the Irish Republic. This was the first simultaneous population count covering all these areas since the censuses of 1911. The co-operation of the Irish Republic in arranging a simultaneous census was of particular value, owing to the considerable sea and land traffic and the movement of population between that country and the United Kingdom. All the reports based on these censuses have now been published.

The short demographic account of the United Kingdom given in this chapter is based mainly on census reports and on the regular returns of births, marriages and deaths, though some use has been made of other special investigations, including the Reports of the Royal Commission on Population.¹

Total Population

The enumerated population of the United Kingdom at the censuses taken on 8th April, 1951, was, to the nearest thousand, 50,225,000, excluding 158,000 persons in the Isle of Man and the Channel Islands, which are not strictly parts of the United Kingdom.

The population had increased by about 2½ million since mid-1939, by about 4 million since 1931, by about 6 million since 1921 and by about 43 million—or about sevenfold—since 1700. The main causes of this increase were a progressive reduction in death rates and a continuance of high birth rates into the beginning of the twentieth century. The population is still increasing, though relatively slowly, and at mid-1958 the home population of the United Kingdom (i.e. those people actually in the United Kingdom at that time) was estimated at 51,680,000.

The population density of the United Kingdom is one of the highest in the world. It was approximately 533 persons per square mile at the time of the 1951 censuses, and had risen to 548 persons per square mile at mid-1958.

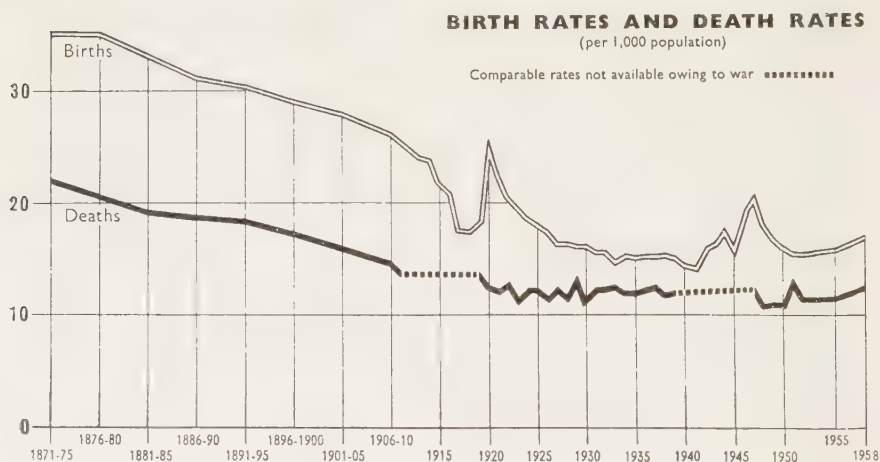
Birth and Death Rates. For most of the nineteenth century the annual birth rate was about 35 per thousand of the population, and the annual death rate was just over 20 per thousand. Both birth and death rates fell over the last 30 years of the century, but the natural increase of the population changed but little. It rose from 12 per thousand in 1851 to 15 per thousand in 1881, and fell to 11 per thousand in 1901.

These fertile years, with their comparatively high death rates in all age groups, produced a population of low average age. At each successive census the population of any age group exceeded the corresponding figure at the preceding census, while the short expectation of life further reduced the ratio of older to younger persons. When, therefore, death rates in all age groups fell by an average of about 33 per cent, as they did between 1880 and 1910, the results were a very low general death rate, which helped to maintain the population increase in spite of a fall in the birth rate, and a gradual increase in the average age of the population.

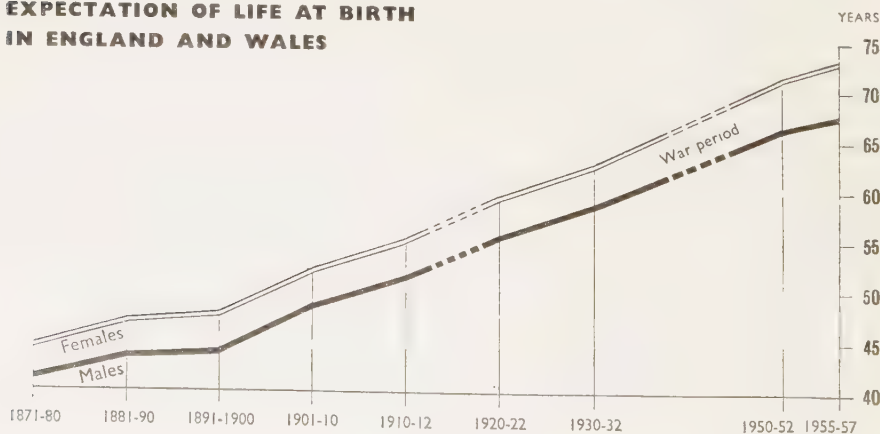
¹ This commission was appointed in March 1944; its main report was published in March 1949.

After the first world war the birth rate fell to less than half the nineteenth-century rate. Even so, the population continued to increase slowly, though its average age rose more rapidly (see diagram p. 12).

Owing to the changing age composition, the general death rate has remained nearly stationary at around 12 per thousand of the population though death rates have continued to fall heavily in every age group, particularly among pre-school children, school children, and adults in their thirties and forties, with a consequent lengthening of the expectation of life from about 50 years at birth in 1900 to 1910 to about 70 years at birth in 1955 to 1957. From 1933 onwards the birth rate steadied itself up to the outbreak of the second world war, after which all orderly movement was interrupted by the disturbed conditions of the war years. The 1947 birth rate (20.7 per thousand of the population) was the highest since 1921, but the 1948, 1949, 1950 and 1951 birth rates were progressively lower, though higher than pre-war. From 1951 to 1956, the birth rate remained fairly steady and slightly higher than before the war, at about $15\frac{1}{2}$ to 16 per thousand of the population; since 1956 it has risen, and was 16.8 per thousand in 1958 (see diagrams below).



EXPECTATION OF LIFE AT BIRTH IN ENGLAND AND WALES



Mortality Causes. The causes of the decline in mortality include better nutrition, rising standards of living, the advance of medical science, the growth of medical facilities, improved health measures, better working conditions, education in personal hygiene, public and private schemes to make the health services generally available, and the smaller size of the family, which has reduced the strain on mothers and enabled them to take greater care of their children.

Mortality from acute infectious diseases and from tuberculosis, and infant and maternal mortality have declined very sharply. Mortality from the main acute infectious diseases of childhood is less than one-hundredth and mortality from tuberculosis is less than one-thirtieth of the rate prevailing in the mid-nineteenth century. Infant mortality (i.e. deaths of infants under one year old per thousand live births) has fallen by about 80 per cent since 1900. Between 1934 and 1942 maternal mortality was nearly halved, and is now only about one-seventh of the 1934 rate. The reported mortality from many of the chronic diseases of middle and old age, such as cancer of the lung and coronary thrombosis, has risen during the twentieth century, and this rise, though exaggerated by the improvement in diagnosis, is at least partly real. Medicine has not yet discovered effective measures to combat some of these diseases, and improvement in positive health does not always bring increased immunity or resistance to them.

Fertility Trends. The fall in birth rates in the latter part of the nineteenth and the early part of the twentieth centuries was due mainly to a decline in the size of the family (i.e. the number of children born per married couple) caused by the spread of deliberate family limitation. Couples married a hundred years ago produced on the average rather more than six liveborn children. The decline seems to have set in with those married in the 1860s, and continued steadily until, with the couples married in the late 1920s, the average family size had been reduced to between 2.2 and 2.1. The decline then stopped, and the figure has remained stable in spite of the disturbance of the war years; the latest data suggest a slight increase.

The generation of girls born about 1840, and married mostly between 20 and 30 years later, had about 40 per cent more children than were needed to replace the original generation, while those born at the beginning of the present century had only about 70 per cent of the number of children needed for replacement. Since then the figure has been rising again and may reach full replacement with the generations born during the second world war. But the rise has been due more to the increased proportion of children surviving to adult life and of women getting married than to the small increase in family size.

At first the decline in family size was most marked among the professional and salaried classes. Among couples married between 1900 and 1930 the families of manual workers were about 40 per cent larger than those of non-manual workers, but this class difference appears to have been diminishing. The decline in family size has been slower in Scotland and Northern Ireland than in England and Wales.

Age Distribution. The first effect of the fall in the birth rate was to reduce the number of children, and therefore the ratio of dependent population to working population. This ratio was at a minimum in the 1930s. Since then the continuous fall in death rates and the low inter-war birth rates have been increasing the proportion of elderly people, and thus reducing the proportion of the working population to the total population. The small age groups born between the wars have been coming to maturity. The size of the age groups reaching retirement age increases yearly, as these groups were born during a period of rapidly expanding population. The continuing fall of death rates in all age groups has still further increased the number of old persons. Moreover, the higher birth rates after 1942 have arrested

the compensating fall in the number of dependent children and have further reduced the ratio of working to dependent population.

At mid-1958 the age distribution of the United Kingdom was estimated as follows:

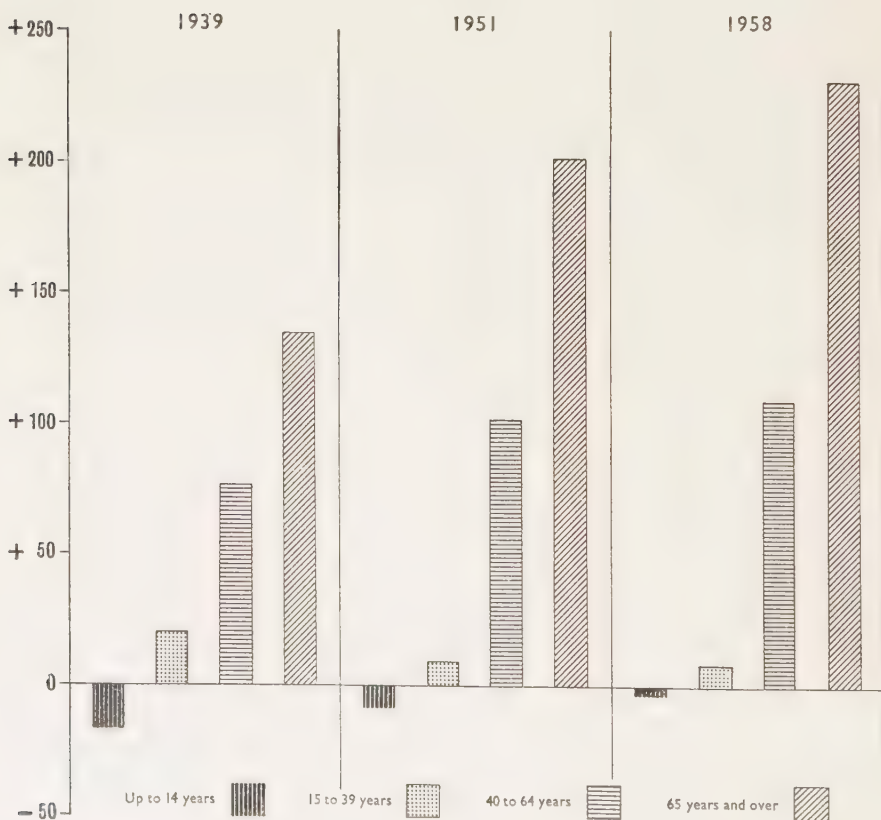
Under 15		23.3 per cent
15 to 64		65.1 per cent
65 and over		11.6 per cent

An unusually large proportion of the population of the United Kingdom (about 14.5 per cent) is now between 45 and 55 years of age. Assuming a continued fall in death rates and net emigration of 27,000 people a year from the usual age groups, it can be estimated that:

- (1) over the next 15 years the population of working age will increase slowly;
- (2) the number of old people (over 65) will increase over the next 30 years by rather more than $2\frac{1}{2}$ million.

PERCENTAGE CHANGE IN POPULATION SINCE 1901 BY AGE GROUP

1901 = 0



Sex Ratio. Total live births of boys currently exceed those of girls by about 6 per cent, but owing to the higher infant mortality rate among boys, and the higher male death rates in all age groups, women have, until recently, outnumbered men in every age group from adolescence onwards and in the total population. Their predominance increases with age and is now over 60 per cent among persons over 70 years of age.

The fall in mortality has affected the sex ratio by increasing the proportion of old persons in both sexes, which has made female predominance in those age groups a weightier factor in the sex ratio of the population as a whole. At the same time there has been a slight rise in the proportion of boys among children under 15 years of age, and the ages at which males outnumber females extend beyond adolescence to about 24 years. There is thus no longer a surplus of women at the usual ages of marriage.

The proportion of females to males in the total population has not varied greatly, however, as these two effects have counterbalanced each other. At present there are between seven and eight per cent more females than males.

Migration. Since the beginning of the nineteenth century, net migration has been markedly outward. In that period, about 25 million persons born in the British Isles are estimated to have emigrated to the United States and Commonwealth countries overseas. On the other hand, large numbers of Europeans, mainly Russians, Poles, Germans and Hungarians, have entered the British Isles during the last 80 years. The net loss by migration since 1871 from the present area of the United Kingdom is about $3\frac{1}{2}$ million. During the inter-censal period 1931-51 the balance of migration to and from the United Kingdom was inward for the first time in the past century. The net gain to the United Kingdom from civilian migration was about half a million, a net gain of three-quarters of a million to England and Wales being offset by net losses from Scotland and Northern Ireland. This net gain was the balance between a large outward movement mainly of British subjects emigrating to Canada, Australia, New Zealand and South Africa, and a larger inward movement consisting chiefly of British subjects returning home during the 1930s and of aliens from Europe, including about a quarter of a million refugees¹ seeking sanctuary in Britain. There was also considerable net immigration from the Irish Republic. Taking only the period 1946-51 the balance of migration by sea (figures for air transport are not available) was outward owing to the high net outflow (some 65,000 a year) to Commonwealth countries overseas. In 1952 this net outflow reached a peak of 87,000, but it was subsequently reduced, chiefly owing to increased immigration into Britain from other parts of the Commonwealth, particularly the West Indies, and the total balance of migration to and from all countries for the years 1952 to 1956 was certainly small. Exceptionally high migration began towards the end of 1956, partly due to a sudden surge in the flow of emigration to Canada, and also to an influx of British repatriates from Egypt, and of some 21,000 Hungarian refugees,¹ of whom over 14,000 have remained in Britain. Migration in 1957, both inward and outward, was over 200,000, if migrants by air are included. Preliminary estimates of emigration in 1958 place it much lower—under 140,000—and it seems likely that immigration was also reduced.

¹ The total number of refugees who have come to Britain in the past twenty-five years has been estimated at about 330,000, of whom 80,000 came before the second world war. In the immediate future, however, Britain's principal contribution to the solution of refugee problems is likely to be its financial support of the international effort. Britain was the originator of the plan for the World Refugee Year, which was inaugurated in June 1959, in accordance with a resolution sponsored by the United Kingdom in the General Assembly of the United Nations in December 1958.

Birthplace and Nationality. At the 1951 census, some 1.7 million persons in the United Kingdom were reported as having been born outside it. About a fifth of them had been born in other independent Commonwealth countries or in United Kingdom dependencies, about a third in the 26 counties of southern Ireland (now the Irish Republic), and nearly half in foreign countries, notably Poland, Germany, Russia and the United States. The number born in the overseas Commonwealth and in the Irish Republic had increased by about one-third and two-thirds, respectively, since 1931, and the number born in foreign countries had approximately doubled. In view of the high levels of immigration, it is probable that the number of persons living in the United Kingdom, but born elsewhere, has increased further since 1951. An important factor in recent years has been immigration from the West Indies, West Africa and Pakistan. Immigrants from those countries at present living in Britain are estimated to number some 200,000.

Less than one per cent of persons were of alien nationality at the time of the 1951 census; the remainder were either citizens of the United Kingdom and Colonies or of other Commonwealth countries, or were British protected persons or citizens of the Irish Republic.

Under the British Nationality Act, 1948, with insignificant exceptions, persons who are born, or whose fathers were born, in the United Kingdom or a colony of the United Kingdom or in a United Kingdom registered ship or aircraft are citizens of the United Kingdom and Colonies. Citizenship may also be acquired: by descent (subject to certain requirements) from a paternal grandfather born in the United Kingdom and Colonies or from a more remote paternal ancestor in the male line; by registration, for citizens of Commonwealth member countries or of the Irish Republic, for minor children and for women married to citizens of the United Kingdom and Colonies; by adoption under the Adoption Act, 1950; and by naturalisation. The requirements for the grant of a certificate of naturalisation include five years' residence in the United Kingdom or Colonies or five years' Crown service, good character, a sufficient knowledge of English and the intention to reside in the United Kingdom or a colony or to remain in Crown service.

A citizen of the United Kingdom and Colonies does not forfeit his citizenship by acquiring or possessing the nationality or citizenship of another country; nor does a woman who is a citizen of the United Kingdom and Colonies lose her citizenship by marriage to an alien. Indeed, a citizen cannot be deprived of his citizenship against his will except in very exceptional circumstances (for example, if he has obtained naturalisation or registration as a citizen by fraud). Any man or woman who is a citizen is, however, at liberty to renounce citizenship if he or she possesses or acquires the nationality or citizenship of another country. Declarations of renunciation are very infrequent.

Citizens of the other independent Commonwealth countries are British subjects (or alternatively Commonwealth citizens) in the United Kingdom. They are free to enter and remain in the United Kingdom without restrictions of any kind. Similar treatment is extended to citizens of the Irish Republic who, in the United Kingdom, are not aliens.

Regional Distribution and Trends

The distribution of the population of the British Isles by country and major administrative region as enumerated at the 1951 censuses, at certain previous censuses back to 1841, and as estimated at mid-1957, is shown in Tables 1 and 2.

The populations of England, Wales, Scotland and Northern Ireland and of each of the principal regions of England were in every case greater in 1957 than in 1951 and in 1951 than in 1931, whereas in the period 1921-31 the populations of Wales,

TABLE 1
POPULATIONS 1841-1958^(a)

		1841	1871	1901	1931	1951	1958 ^a
ENGLAND (excluding Monmouth- shire)	Persons	14,867,882	21,299,771	30,514,967	37,359,045	41,159,213	42,494,000
	Males	7,259,028	10,352,934	14,717,155	17,839,205	19,745,530	20,462,000
	Females	7,608,854	10,946,837	15,797,812	19,519,840	21,413,683	22,032,000
WALES AND MONMOUTH- SHIRE	Persons	1,046,266	1,412,495	2,012,876	2,593,332	2,598,675	2,615,000
	Males	518,558	706,000	1,011,458	1,293,805	1,270,103	1,282,000
	Females	527,708	706,495	1,001,418	1,299,527	1,328,572	1,333,000
SCOTLAND	Persons	2,620,184	3,360,018	4,472,103	4,842,980	5,096,415	5,169,000
	Males	1,241,862	1,603,143	2,173,755	2,325,523	2,434,358	2,480,000
	Females	1,378,322	1,756,875	2,298,348	2,517,457	2,662,057	2,689,000
GREAT BRITAIN	Persons	18,534,332	26,072,284	36,999,946	44,795,357	48,854,303	50,278,000
	Males	9,019,448	12,662,077	17,902,368	21,458,533	23,449,991	24,224,000
	Females	9,514,884	13,410,207	19,097,578	23,336,824	25,404,312	26,054,000
NORTHERN IRELAND	Persons	1,648,945	1,359,190	1,236,952	1,243,000 ^b	1,370,921	1,402,000 ^a
	Males	799,711	647,285	589,955	601,000 ^b	667,819	684,000
	Females	849,234	711,905	646,997	642,000 ^b	703,102	719,000
TOTALS GREAT BRITAIN AND NORTHERN IRELAND	Persons	20,183,277	27,431,474	38,236,898	46,038,357	50,225,224	51,680,000 ^a
	Males	9,819,159	13,309,362	18,492,323	22,059,533	24,117,810	24,908,000
	Females	10,364,118	14,122,112	19,744,575	23,978,824	26,107,414	26,773,000
ISLE OF MAN	Persons	47,975	54,042	54,752	49,308	55,253	55,000 ^e
	Males	23,011	25,914	25,496	22,443	25,774	26,000
	Females	24,964	28,128	29,256	26,865	29,479	29,000
JERSEY	Persons	47,544	56,627	52,576	50,462	57,310	57,000 ^e
	Males	21,602	24,875	23,940	23,424	27,291	not available
	Females	25,942	31,752	28,636	27,038	30,019	not available
GUERNSEY AND ASSOCIATED ISLANDS	Persons	28,521	33,969	43,042	42,743	45,496	45,000
	Males	12,943	15,433	21,140	20,675	22,091	not available
	Females	15,578	18,536	21,902	22,068	23,405	not available
IRISH REPUBLIC	Persons	6,528,799 ^c	4,053,187	3,221,823	2,933,000 ^d	2,960,593	2,853,000
	Males	3,222,485 ^c	1,992,468	1,610,085	1,497,000 ^d	1,506,597	1,439,000
	Females	3,306,314	2,060,719	1,611,738	1,436,000 ^d	1,453,996	1,414,000
TOTALS BRITISH ISLES	Persons	26,836,116	31,629,299	41,609,091	49,113,870	53,343,876	54,690,000
	Males	13,099,200	15,368,052	20,172,984	23,623,075	25,699,563	not available
	Females	13,736,916	16,261,247	21,436,107	25,490,795	27,644,313	not available

Source: Census Reports and Estimates by Population Authorities.

(a) The figures for 1841, 1871, 1901, 1931 and 1951 (with the exception of those indicated in (b) and (d) below) are for populations enumerated in censuses. The figures for 1958 are mid-year estimates to the nearest thousand. The figures for Scotland and Northern Ireland are rounded from estimates in units and this may lead to apparent small discrepancies in the totals.

(b) Estimate (censuses were taken in 1926 and 1937, but not in 1931).

(c) Military and Naval personnel are not included in these figures.

(d) Estimate (censuses were taken in 1926 and 1936, but not in 1931).

(e) These figures take no account of migration.

Scotland and Northern Ireland had declined. Between 1931 and 1951, the greatest increases were in the eastern, southern, midland and south-western regions of England, and in Northern Ireland. The smallest increase was in Wales. Since 1951 the main increases have been in the eastern, southern and north midland regions of England.

The population of the United Kingdom taken as a whole is predominantly urban and suburban. During the nineteenth century, when the labour demands of newly developing industry drew great numbers from the countryside to the towns, the urban element continuously and rapidly outgrew the rural element. At the end of the nineteenth century, 75 per cent of the British population was living within the boundaries of urban administrative areas and the large conurbation¹ was already the dominant type of British community. By 1911, the economic and social limits of these conurbations extended far beyond the administrative boundaries of the cities which formed their core, owing to the building of outer suburbs which linked up neighbouring towns. Since 1921, nearly 40 per cent of the population has lived in the seven great conurbations whose centres are the cities of London, Manchester (South East Lancashire), Birmingham and Wolverhampton (West Midlands), Glasgow (Central Clydeside), Leeds and Bradford (West Yorkshire), Liverpool (Merseyside), and Newcastle upon Tyne (see Table 2, pp. 17-18).

During the twentieth century, the general character of urbanisation changed, the later increases in urban areas being relatively much smaller and much more due to the natural growth of the towns than to the influx of population from rural areas. Moreover, two new and decided trends became apparent: first, the outer rings of conurbations and the suburbs of large cities began to increase in population much more rapidly than the large cities themselves; secondly, there was a considerable migration, particularly of young adults, to the expanding new light industries and suburban residential areas springing up in and around London and Birmingham. This movement was intensified by the heavy unemployment of the inter-war years which affected with particular severity the textile and heavy engineering industries of Northern England, South Wales and Scotland.

The combined effect of these two trends was that the outer rings of the London and Birmingham conurbations increased most in population, while the remoter country areas and some industrial towns of Northern England, Wales and Scotland declined. In urban areas in England and Wales, the medium-sized towns of between 50,000 and 100,000 inhabitants increased most rapidly, while the populations of very large and very small towns tended to decline.

The second world war halted suburban building and for a time reduced the population of conurbations and large cities, but by the end of the war many people had returned to the neighbourhood of their pre-war homes. At the 1951 census many large cities and towns had larger populations than in 1939, but the populations of others, notably London, were smaller. The decrease in the County of London was about two-thirds of a million, and in spite of an increase in the population of the outer ring, the population of Greater London,² 8,348,023, was 380,000 less than in 1939. Since 1951, this decline has continued, while the populations of many urban and rural areas surrounding Greater London have continued to increase

¹ An area of urban development where a number of separate towns have grown into each other or become linked by such factors as a common industrial or business interest or a common centre for shopping or education.

² Greater London (an area of 721.6 square miles) coincides with the metropolitan and city police districts. It consists of the administrative county of London (117 square miles, comprising the City of London and 28 metropolitan boroughs), the county of Middlesex and parts of the counties of Surrey, Hertfordshire, Essex and Kent.

TABLE 2
DISTRIBUTION OF THE POPULATION (a)

Thousands

	Area in square miles(b)	1921	1931	1939(c)	1951	1958(c)
Urban and rural districts						
England and Wales:						
Urban districts ..	8,240.5	30,035	31,952	34,183	35,336	36,185
Rural districts ..	50,104.5	7,851	8,000	7,277	8,422	8,924
Scotland:						
Cities and burghs	416.3	3,311	3,362	3,525	3,563	3,648
Landward areas ..	29,378.6	1,572	1,481	1,482	1,534	1,521
Northern Ireland:						
Urban districts ..	78.5	638(d)	678(d)	684	728	772
Rural districts ..	5,159.5	619(d)	602(d)	611	643	630
Standard regions of						
England and Wales						
Northern	7,470.7	3,020	3,038	3,003	3,141	3,202
East and West Ridings	3,962.7	3,731	3,929	3,976	4,097	4,134
North Western ..	3,083.0	6,023	6,197	6,237	6,447	6,485
North Midland ..	6,303.8	2,746	2,939	3,065	3,378	3,532
Midland	5,024.9	3,503	3,743	3,987	4,423	4,605
Eastern	7,263.9	2,224	2,433	2,691	3,098	3,516
London and						
South Eastern ..	4,190.5	9,486	10,330	11,046	10,906	11,006
Southern	4,846.3	1,954	2,135	2,317	2,649	2,908
South Western ..	8,183.5	2,544	2,615	2,673	3,021	3,106
Wales	8,015.8	2,656	2,593	2,465	2,599	2,615
Conurbations						
Greater London ..	721.6	7,488	8,216	8,728	8,348	8,222
South East Lancashire	379.6	2,361	2,427	2,421	2,423	2,416
West Midlands ..	268.8	1,773	1,933	2,079	2,237	2,281
Central Clydeside ..	326.5	1,638	1,690	1,783	1,758	1,791
West Yorkshire ..	480.9	1,614	1,655	1,658	1,693	1,688
Merseyside	148.5	1,263	1,347	1,357	1,382	1,383
Tyneside	90.1	816	827	825	836	848
Cities						
Belfast	23.9	415(d)	438(d)	439	444	436
Birmingham ..	79.9	919	1,003	1,053	1,113	1,095
Bradford	39.9	286	298	288	292	288
Bristol	41.2	377	397	419	443	438
Cardiff	23.6	221	227	226	244	253
Coventry	29.9	128	167	220	258	281
Edinburgh	50.6	420	439	472	467	467
Glasgow	60.4	1,034	1,088	1,128	1,090	1,079
Kingston upon Hull	22.4	287	314	318	299	301
Leeds	59.8	458	483	497	505	512
Leicester	26.5	234	239	263	285	278

Continued overleaf

TABLE 2 (*contd.*)
DISTRIBUTION OF THE POPULATION (a) *Thousands*

	Area in square miles(b)	1921	1931	1939(c)	1951	1958(c)
<i>Cities—contd.</i>						
Liverpool	42.7	803	856	822	789	762
Manchester	42.6	730	766	728	703	677
Newcastle upon Tyne	17.3	275	283	293	292	272
Nottingham	25.3	263	269	279	306	313
Sheffield	61.9	491	512	522	513	499
Stoke on Trent ..	33.1	240	277	271	275	271

Source: Census Reports and Estimates by Population Authorities.

(a) The boundaries of some of the administrative areas have been altered from time to time. The population figures given for cities relate to the areas as these were defined in the year noted at the head of each column. The figures for regions and conurbations, however, relate as nearly as possible to areas as constituted in 1951.

(b) Area at the date of the 1951 census of population.

(c) Mid-year estimate.

(d) 1926 and 1937 census figures.

very rapidly. There has also been a tendency for other large towns of over 250,000 inhabitants to decline in population, while towns of between 50,000 and 100,000 inhabitants have grown rapidly.

Table 2 shows the distribution of the population by urban and rural districts and the populations of the standard administrative regions, of the seven major conurbations and of 17 large cities, some of which are the principal cities included in the conurbations.

Language

In England, Wales, Scotland and Northern Ireland, English is the language predominantly spoken. In Wales, however, Welsh, a form of British Celtic, is the first language of the majority of the population in most of the western counties and was spoken by 29 per cent of the population at the time of the 1951 census. In Scotland, in 1951, nearly 100,000 persons, mainly in Ross and Cromarty, Inverness, Argyll, and Lanark, spoke the Scottish form of Gaelic,¹ while a few families in Northern Ireland spoke the Irish form of Gaelic. The Manx and Cornish varieties of Celtic are no longer effectively living languages, although, in the Isle of Man, Manx is spoken by a few people, and is used in addition to English for certain official pronouncements.

English is spoken throughout the Channel Islands, but a Norman-French *patois* is still also spoken there by some people. French is still the official language of Jersey, used for ceremonial and official procedure; both French and English are used in the courts. In Guernsey, however, English is now used for almost all official proceedings.

SOCIAL PATTERNS

A general summary of trends in social organisation, similar in scope to the foregoing summary of population trends, is not practicable. It may be useful, however,

¹ Most of the islands off the west coast of Scotland where Gaelic is spoken are included in the counties of Ross and Cromarty, Inverness and Argyll.

to review some of the evidence relating to the structure of British households and the extent and use of leisure in Britain in order to provide a background to the information given in later chapters on such matters as town planning, housing, and transport.

Number and Composition of Households

In Great Britain, as in other countries, most people live as members of private households (usually families). Less than 5 per cent of the population was enumerated by the censuses of 1911, 1921, 1931 and 1951 in institutions such as hotels, schools, and hospitals.

In 1911 there were about nine million private households¹ in Great Britain. By 1951, according to the censuses of England and Wales, and of Scotland, there were about 14½ million households, an increase of about 60 per cent. This expansion, so much more rapid than the 19 per cent increase in the total population for the same period, was, in fact, of the same order as the increases in the numbers of persons over 24 years old and of married persons. In other words, the increasing age of the population meant more but smaller families. The average size of households in Great Britain fell from 4.5 persons in 1911 to 3.2 in 1951. In England and Wales the number of persons living in households of one or two persons almost trebled between 1911 and 1951. At the end of this period such households constituted about 40 per cent of private households and comprised about 20 per cent of the population in private households. In 43 per cent of families of two persons, the head of the household was 60 years of age or over.

It has been difficult to increase the number of separate dwelling-places (houses or flats) sufficiently rapidly to overtake the increasing number of private households, and this difficulty was aggravated by the suspension of house-building and the destruction of property during the second world war. In 1951, there were only some 13.7 million structurally separate dwelling-places in Great Britain, and about 2 million households shared a home. About 70 per cent of the dwellings were houses of four to six rooms (mainly terraced or semi-detached houses), while 20 per cent were of three rooms or less (mainly flats). The proportion of small dwellings was greatly above average in Scotland, where there were many slum tenements, and considerably above average in London.

Of the 14½ million private households in Great Britain in 1951, 11½ million were estimated according to the 1951 census one per cent sample tables (based on an analysis of a representative one per cent sample of census returns in Great Britain) to be of the simplest type, comprising married couples or widowed persons with their children, if any, or persons living alone. More specifically, they comprised 3.2 million married couples with no children, 900,000 widowed persons living alone, 6.9 million married couples or widowed persons with children of any age, 600,000 single persons living alone. Over a third of all married couples living alone were 60 years old or over; less than a quarter of the married couples under 40 years of age in these simplest types of household had no children. Some three-quarters of the single persons living alone and almost all widowed and divorced persons living alone were over 40 years old, and about two-thirds of all persons living alone were 60 years of age or over.

Only 2 million households contained persons less closely related to the head than parent or brother or sister, or contained non-relatives. In nearly half of these households, a second family—a married couple or a woman with children—was living with the first family, usually the parents. Of the remaining 1.1 million house-

¹ Counting persons living alone as one-person households.

holds which contained some unrelated or distantly related persons (numbering 1.24 million), 300,000 households consisted of only two persons.

Over 8 million households (57 per cent of all households) were estimated in the 1951 census sample tables to be without children under 16, while another 3.1 million contained only one child.

It was estimated that in 1951 there were 180,000 households in Great Britain employing a total of 205,000 resident domestic servants, of whom 178,000 were in England and Wales. This compares with an estimate of 706,800 resident domestic servants in England and Wales in 1931.

Over half of the resident domestic servants in 1951 worked in small households (of not more than three persons including the servant), while more than a quarter were acting as the sole servant and household companion to one person of over 40 years of age. Already in 1951, a large proportion of resident domestic servants—and possibly the majority of those working for families with children—were girls from Ireland or from continental Europe, many of whom were attracted by the opportunity to see Britain or to learn English. Since 1951, the number of girls from overseas coming to take resident domestic posts has increased.

In the years since 1951, considerable changes in the numbers, size and composition of households may have taken place. No firm information on trends is available but, in view of the extent of house-building and the continued increase in the number of old people it is likely that the average size of households has continued to decrease.

The small average size of households does not imply that wider family and kinship ties are without strength and social significance. Indeed, a study, published in 1957,¹ stressed the importance of the mutual help of relatives and neighbours in the long-established and balanced communities living in the more crowded parts of East London. The survey, which also covered a suburban area of Greater London, noted the dangers of weakening such ties when households are moved out to more congenial suburban surroundings.

Work and Leisure

The great majority of British males over 15 years of age are in full-time gainful employment, and the majority of females are either housewives or in full-time gainful employment. In many cases housewives also undertake part-time or even full-time employment.

Agreed hours of full-time work for the majority of occupations are usually from 42 to 46 hours a week. Actual weekly hours worked by men average a little longer owing to overtime working, and actual hours worked by women and girls average a little less. In addition, the journey to and from work is often long. The 1951 census showed that three-quarters of the 1½ million persons working in central London lived outside it and that many travelled in from the fringes of Greater London and some from farther away. A sample survey of travel in Greater London, made in 1954, showed that 89 per cent of workers in Greater London made regular journeys to work and that 56 per cent used public transport. The average time taken by such persons was 39 minutes each way, though for workers in central London it was 47 minutes each way.

There is also often a long journey for housewives to the main shopping centre in both urban and rural areas. According to a sample survey made in 1946, it averaged about 18 minutes each way, and in many rural areas took much longer. In most areas there are, of course, a few shops much closer at hand.

¹ *Family and Kinship in East London*, by Michael Young and Peter Willmott.

. A sample survey made in 1947 showed that only 6 per cent of housewives employed any paid help, and only 1 per cent¹ had a resident servant. Such surveys confirm, what would in any case be readily deduced from everyday experience, that housewives have less leisure and considerably fewer periods of continuous leisure of over one hour than other persons in Britain, in spite of the growth of the habit of eating some meals away from home and the spread of labour-saving devices. Two households in every three now have a vacuum cleaner, one in three a washing machine and about one in eight a refrigerator.

Compared with earlier generations, however, most people today have more leisure. In many industries and services, hours of work are usually arranged to give a five-day week, and most employees are entitled to two weeks' continuous holiday a year in addition to the statutory public holidays. About half of the population take at least a week's holiday away from home every year, mostly in July and August. Some two-thirds of these spend their holiday by the sea in Britain. A relatively small but rapidly increasing number of holiday-makers go abroad: over three million in 1958, including just over one million to the Channel Islands and to the Irish Republic; in the same year, 1,258,000 overseas tourists (including 345,000 from the United States) came to visit Britain.

At least a quarter of the adult population is interested in playing or going to watch outdoor sports.² Sporting interests are becoming increasingly varied (see Chapter XVI) but Association football and cricket are still the most popular. Much of the gambling with small stakes, which is practised at least occasionally by three adults out of four, is on the results of sporting events, mainly horse and greyhound racing and football matches (through the football pools, see p. 497).

The spread of television has added a vast new audience of indoor spectators to the crowds who go to watch sporting events and great national occasions. By mid-1959, about two-thirds of the families in Britain (and a somewhat higher proportion of the large families) had a television set; viewers are fairly evenly distributed among all sections of the population, irrespective of income or occupation. The number of television licences has increased fourfold since 1953 and is still increasing rapidly.

Rising standards of living and, in particular, the widely distributed ownership of television sets and motor vehicles have affected leisure habits in many ways, both good and bad, and have provided new and varied opportunities for recreation and entertainment.

There were some 8 million licensed motor vehicles in the summer of 1958, of which over 4½ million were private cars and 1½ million were motor cycles (including motor scooters). Many cars and some motor cycles are used partly, if not primarily, for business purposes. During the summer, however, roads to the sea and the country and to sporting events are usually thronged (and sometimes jammed) with cars, especially on fine Saturdays and Sundays. The spread of car ownership, making many people more independent of public transport, is leading to a new and more scattered distribution of houses, and is changing the siting requirements of factories, shops and offices, as well as the whole pattern of leisure activities.

During the past twenty years, the real incomes of manual workers, and particularly of unskilled workers and young workers under eighteen years of age, have risen rapidly both in absolute terms and in relation to the incomes of non-manual workers.

¹ This estimate has been shown to be approximately correct by the analysis of households employing servants made in the 1951 census sample tables (see p. 20).

² A social survey of Derby made in 1953 showed that half the adult population in that town, including two-thirds of the men, were at least occasional spectators of sporting events, and that over one-fifth, including over half those under 25 years of age, actually participated, most of them regularly.

At the same time, opportunities for education and promotion, already considerable, have widened. An investigation of occupational and social mobility made ten years ago found that, if occupations were classified by social status into seven groups, only one man in three had the same social status as his father. More than half the people in the two top groups ('professional and administrative' and 'managerial and executive') were the sons of men who had held less important positions, while only a quarter of the sons of unskilled workers were themselves in occupations in that category. In consequence, social distinctions based on occupation have become less clear cut, and differences in the ways of life of manual and non-manual workers are much less pronounced. Many manual workers' families have acquired habits and tastes which were formerly regarded as 'middle-class'.

Such social changes often call for difficult adjustments. Many families of unskilled and semi-skilled workers, for example, suddenly find themselves with plenty of money to spend when their children leave school for work at fifteen years of age; while the families of most non-manual and many skilled manual workers forgo the extra income in order to continue their children's education. The high earnings of young workers, however, have influenced the status and outlook of adolescents generally. 'Teenage' society with sufficient coherence, independence and spending power to establish its own customs, tastes and fashions is a feature of present-day Britain; and, as in many other countries, the activities of groups of teenagers without adequate parental control attract more attention than formerly and are a serious social problem in certain areas.

The chief long-term effects of television, according to recent investigations, are to widen tastes and stimulate new interests and to provide a substitute for the former habit of going regularly to watch favourite sporting events and other entertainments. One result has been a marked fall in attendances at cinemas and, to a lesser extent, at football matches, formerly the main entertainments of large sections of the community. The cinema remains, however, the most popular form of indoor entertainment outside the home. To young men and women and older children, cinema-going is a social occasion, and probably at least half of them go as often as once a week.

Attendances at theatres are much smaller, though most people visit them occasionally. There are only some 500 theatres in the country compared with some 4,000 cinemas. Nevertheless, there is an enthusiastic and growing public not only for plays but for ballet, opera and concerts.

Dancing is popular, especially with those under twenty-five years of age, and it is thought that about five million people go dancing every week. There have been estimated to be some 450 regular dance halls in the United Kingdom which open three times a week or more and employ a manager, and between 4,000 and 5,000 recognised schools of ballroom dancing. Public dances are also often held in other halls, while many of the clubs and societies which abound in Britain hold dances from time to time in their own or hired premises. In addition, Scottish and English traditional dances have their own wide and increasing following, while, since the war, there has been a very large increase in attendance at ballet and other stage dancing classes (mainly by young girls). About three-quarters of a million pairs of ballet shoes are sold annually.

Clubs and societies, which may be primarily social or devoted to some particular purpose, range from small informal groups to great national and international organisations with branches throughout the country. Organisations of national importance in social life and in the promotion of social gatherings include, in addition to those connected with religious denominations, the Working Men's Clubs and Institutes, the Townswomen's Guilds and the Women's Institutes.



An English Village: Muker in Swaledale, North Riding of Yorkshire.



The Scottish Highlands: Loch Shiel. Prince Charles raised his standard here in 1745.



Belfast Dock: entrance to the capital of Northern Ireland.



The Coast of Wales: Tremadoc Bay, Merionethshire, and the Snowdon Range.

There are some 3,470 clubs, with over two million members (mainly but not entirely men), affiliated to the Working Men's Club and Institute Union. These clubs are primarily social and recreational, though they also arrange lectures and classes. Over 2,000 Townswomen's Guilds, with a total membership of about 250,000, are affiliated to the National Union of Townswomen's Guilds. The guilds are both educational and social in purpose, and they co-operate in many public welfare activities. The declared objective of the National Federation of Women's Institutes is to improve rural life and amenities; the institutes make an important contribution to rural life by providing meeting places for countrywomen and by organising social gatherings. There are in villages throughout England and Wales some 8,400 institutes with over 450,000 members, while in Scotland and Northern Ireland there are Women's Rural Institutes with similar aims and interests.

In spite of the growth of social clubs, one traditional social rendezvous, the public house, has maintained and even increased its popularity both in towns and in villages, although there has been a marked decrease in drunkenness and in consumption of alcohol per head since the nineteenth century; the recent rise in drunkenness among adolescents, though serious, is on a relatively small scale. The public house attracts a very wide circle of casual customers (both men and women) as well as many 'regulars', who meet for a drink and a chat, and perhaps to play some traditional public house game or to watch television. A rival feature of urban life is the coffee bar. A characteristic of many of these coffee bars, which stay open until late at night and are popular as a rendezvous for young people, is their modern décor. On the other hand, many people, especially the married and the elderly, spend much of their leisure at home—reading, listening to the radio or gramophone, viewing television, entertaining their friends,¹ looking after pets² and pursuing hobbies. Hobbies are, of course, innumerable in their variety, but many are practical and contribute to the improvement of the home. About four out of five families do most of their own decorating, while the sales of hand-tools and the rapidly increasing sales of small power-tools and powered garden implements testify to the extent and range of home carpentry and joinery and to the interest and initiative that maintain Britain's homes and gardens. Even in the towns many houses have some garden, and the standard of both town and country gardens is high. It is estimated that there are over 4,000 local horticultural societies in Britain. The numerous flower and vegetable shows held in town and country are very popular, and there is a large attendance at those held in London, particularly at the annual Chelsea Flower Show.

A number of people, young and old, find their main free-time interest in some form of sustained group activity connected, for example, with the churches, trade unionism, politics, social welfare and reform, or with cultural pursuits, especially amateur dramatics and music-making (see the Arts section of Chapter VII). People with such interests are, of course, in a minority,³ but they constitute an important and characteristic feature of British life and, indeed, an essential ingredient in the working of British democracy.

¹ Indications of the rise in the scale and standard of home entertaining are provided by the increasing sales of table wines (double those of the 1930s) and of expensive foods, and by the frequent newspaper and periodical features and broadcast programmes devoted to cooking recipes.

² There are some 4 million dogs in Britain, over 6 million cats and 8 or 9 million pet birds (mainly budgerigars and canaries).

³ The figures from the Derby Survey showed that eight per cent of adults in that town belonged to intellectual or cultural clubs or societies, eleven per cent were members of some political party, thirteen per cent went to church every week (9 out of 10 homes had a Bible), and three per cent held some church office.

II. GOVERNMENT AND ADMINISTRATION

GENERAL SURVEY

The United Kingdom is a monarchical state, whose origins go back to the ninth century when all England was unified under a Saxon king. Wales and Ireland became part of the kingdom before the end of the thirteenth century, and the English and Scottish thrones were dynastically united in the person of James I and VI in 1603. In 1707, the Treaty for the Union of England and Scotland provided that the two countries 'should be forever united into one kingdom', and one Parliament (the Parliament of Great Britain) became the supreme authority in both countries. In 1801, the authority of this Parliament was extended to the whole of the United Kingdom by a provision of the Act for the Union of Great Britain and Ireland, 1800, which joined the Irish Parliament to the Parliament of Great Britain. In 1922, the United Kingdom was diminished by the separation of the 26 counties of Southern Ireland (now the Irish Republic). Meantime, the Government of Ireland Act, 1920, had enacted a constitution for Northern Ireland which perpetuated Northern Ireland representation in the United Kingdom Parliament as the supreme authority and, at the same time, provided that country with its own legislature and executive, to deal with domestic affairs.

Fundamental policies on major issues are adopted for the whole of the United Kingdom; methods of government, however, are flexible and adapted to individual needs. Thus, there is some measure of devolution in the administration of Welsh affairs under a Cabinet Minister (who is Minister for Welsh Affairs) assisted by a Minister of State, who spends most of his time in Wales; while Scotland, although it has no separate Parliament, has its own system of law, its own courts, its own established church, its own educational system, and its own Government departments under the direction of the Secretary of State for Scotland, who is a leading member of the United Kingdom Government. The Northern Ireland Government departments are responsible to the Northern Ireland Parliament. The Channel Islands and the Isle of Man (which are Crown dependencies, not part of the United Kingdom) have their own legislative assemblies and systems of local administration and of law, and their own courts. At the same time, they have a special relationship with the United Kingdom because of their proximity to the mainland and the antiquity of their connection with the Crown. They are treated as part of the mainland for purposes of trade and postal communication and are 'territories for whose international relations Her Majesty's Government is responsible'. They are also formally subject to the United Kingdom Parliament.

The United Kingdom is thus a multi-national nation; it is also one of the member nations of the Commonwealth, all of which (except the republics of India and Pakistan and the Federation of Malaya) owe allegiance to the Crown. India, Pakistan and Malaya accept the Queen as the symbol of the free association of the member nations and, as such, as the head of the Commonwealth.

Each member nation of the Commonwealth has its own separate constitution, governed by different laws and customs, and subject to different powers of change. The United Kingdom constitution is formed partly by statute, partly by common

law and partly by precepts and practices, known as conventions, which are not part of the law of the land in that violation of them may lead to proceedings in a court of law, but which are nevertheless indispensable to the machinery of government. The rules of the constitution have never been codified; principles and practice are both alterable, and the rules of the constitution can be adapted to changing conditions at any time by the passing of an Act of Parliament or by the general acceptance of a new convention, without serious disturbance to existing organs and forms.

The organs of government in the United Kingdom constitution are readily distinguishable, although their functions often intermingle and overlap. They are:

- (1) the legislature, which consists of the Queen in Parliament, and is the supreme authority in the realm;
- (2) the executive, which consists of: (a) the Cabinet and other Ministers of the Crown, who are responsible for initiating and directing national policy; (b) Government departments, most of them under the control of ministers, and all staffed by civil servants, who are responsible for administration at the national level; (c) local authorities, who administer and manage many services at the local level; and (d) statutory boards, which are severally responsible for the operation of particular nationalised industries or public services, and which are subject to ministerial control in varying degrees; and
- (3) the judiciary, which determines common law and interprets statutes, and is independent of both the legislature and the executive.

This chapter will describe these three organs of government in some detail in order to show how the constitution of the United Kingdom works.

THE MONARCHY

The monarchy is the most ancient secular institution in the United Kingdom. Its continuity has been broken only once in over a thousand years; and in spite of interruptions in the direct line of succession, the hereditary principle upon which it was founded has never been abandoned. Queen Elizabeth II is a descendant of the Saxon king, Egbert, who united all England in the year 829.

According to the Royal Titles Act, 1953, the royal title in the United Kingdom is: 'Elizabeth the Second, by the Grace of God of the United Kingdom of Great Britain and Northern Ireland and of Her other Realms and Territories Queen, Head of the Commonwealth, Defender of the Faith'. The form of the royal title is varied for the other member nations of the Commonwealth which owe allegiance to the Crown, to suit the particular circumstances of each.

The seat of the monarchy is in the United Kingdom. In the other member nations of the Commonwealth which owe allegiance to the Crown, the Queen is represented by a Governor-General appointed by the Crown on the advice of the ministers of the country concerned. The functions of the Governor-General are to fill the role of ceremonial head of the State and to exercise the prerogative powers of the Crown in public administration according to the constitutional practice obtaining in the country to which he is accredited. As the Queen's representative, the Governor-General is wholly independent of the United Kingdom Government; he is often a national of the country in which he holds office. In the United Kingdom dependencies the Queen is represented by Governors-General, Governors, High Commissioners or Residents, who are appointed by the Crown, but who have, in addition, varying executive and legislative powers, and are responsible to the United

Kingdom Government for the good government of the countries concerned. In the Channel Islands, and in the Isle of Man, the Queen is represented by a Lieutenant-Governor.

Succession

The title to the Crown derives from the Act of Settlement, 1701, which provided that 'the Crown . . . shall remain and continue to the said most excellent Princess Sophia¹ and the heirs of her body being Protestants'. Subsequent Succession to the Crown Acts have confirmed this declaration; and although succession is not bound to continue in its present line, it cannot now be altered (under a provision of the Statute of Westminster, 1931) except by common consent of the member nations of the Commonwealth which owe allegiance to the Crown.

The inheritance of the Crown is governed by rules of descent, which provide that the sons of the Sovereign are in Order of Succession to the Throne according to their seniority, or, if there are no sons, the daughters in order of seniority. When a daughter succeeds, she becomes Queen-Regnant, and the powers of the Crown are vested in her as fully and effectively as though she were a king. By convention, the consort of a king takes the rank and style of her husband; but the converse does not apply, and the constitution has never attached any special rank or privileges to the husband of the Queen-Regnant.

Accession

There is no interregnum between the death of one Sovereign and the accession of another. Immediately on the death of his or her predecessor the new Sovereign is proclaimed at an Accession Council to which all members of the Privy Council are summoned. The Lords Spiritual and Temporal, the Lord Mayor, aldermen and other leading citizens of the City of London, and the High Commissioners in London of the member nations of the Commonwealth are also invited to attend.

Coronation

The coronation of the Sovereign follows the accession after an interval which may last for a year or more. The ceremony has remained much the same in substance for nearly a thousand years, although the details have frequently been modified to bring it into conformity with the customs of the time. The service used at the coronation of Queen Elizabeth II in 1953 was derived from that used at the coronation of King Edgar at Bath in the year 973.

The coronation service is held at Westminster Abbey in the presence of representatives of the peers, the Commons and all the great public interests in the United Kingdom, of the Prime Ministers and leading members of the other Commonwealth countries, and of representatives of foreign States.

Acts of Government

The Queen is the personification of the State. In law, she is the head of the executive, an integral part of the legislature, the head of the judiciary in England and Wales, Northern Ireland, and Scotland, the commander-in-chief of all the armed forces of the Crown and the temporal head of the established Church of England. In practice, as a result of a long evolutionary process, during which many restrictions on the royal prerogative have been imposed, these powers have changed from being the weapon of the monarchy to being the means of giving effect to the public will. Today, the Queen acts only on the advice of her ministers which she cannot constitutionally ignore. She reigns, but she does not rule. The United Kingdom is governed by Her Majesty's Government in the name of the Queen.

¹ The Electress of Hanover, grand-daughter of James I.

Within this framework, and in spite of the fact that the trend of legislation during the past hundred years has been to assign powers directly to ministers without any necessity for royal intervention, there are still important acts of government which require the participation of the Queen.

The Queen summons, prorogues and dissolves Parliament; she opens the new session with a speech from the throne; and she must give Royal Assent before a Bill which has passed all its stages in both Houses of Parliament becomes a legal enactment. The Queen is 'the fountain of justice', and in spite of the fact that the judiciary is now completely independent of the executive, 'all jurisdictions of the courts are either indirectly or immediately derived from the Crown'. As 'the fountain of honour', the Queen confers peerages, knighthoods and other honours,¹ and she makes appointments to all important State offices, including those of judges, officers in the armed forces, governors, and diplomats, and to all leading positions in the established Church of England. The Queen's consent and approval are required before a minister can take up office or a Cabinet be formed. In the realm of international affairs, by virtue of her pre-eminence as head of the State, the Queen has the prerogative power to conclude treaties, to cede or accept territory, to declare war and to make peace.

Other prerogative powers of the Crown relate to the creation of corporations by Royal Charter; the construction and supervision of harbours; the guardianship of infants and persons of unsound mind; the administration of charities; coinage; the grant of franchises, e.g., markets, ferries and fisheries; the right to treasure trove; and the sole right of printing or licensing others to print the Bible, the Book of Common Prayer and State papers.

There is clear ministerial responsibility for all these acts of government, as is shown in the three ways in which the royal will can, constitutionally, be expressed: by Order in Council made 'by and with the advice of the Privy Council'; by Order, Commission or Warrant signed personally with the Queen's initials and generally bearing the signature of one or more responsible ministers; or by Proclamation, Writs, Letters Patent, or other documents under the Great Seal affixed by the Lord Chancellor in obedience to a Royal Warrant countersigned by a minister.

Ministerial responsibility for the exercise of powers by the Crown does not detract from the importance of the participation of the Sovereign in the smooth working of government; for although the Queen has no personal authority and must show complete impartiality in every field, she must be informed and consulted on every aspect of the national life. The Queen holds meetings of the Privy Council, gives audiences to her ministers and other holders of office at home and overseas, receives accounts of Cabinet decisions, reads dispatches and signs innumerable State papers.

Such is the significance attached to these royal functions that provision has been made by Acts of Parliament for a Regent to be appointed to fulfil them if the Sovereign is totally incapacitated, or is under the age of eighteen on accession to the throne. The latest of these Acts—the Regency Act, 1953—laid down that the first potential Regent should be the Duke of Edinburgh and thereafter the Princess Margaret and then those in succession to the throne who are of age. In the event of the Sovereign's partial incapacity or absence abroad, provision is made for the appointment of Counsellors of State (generally speaking, the wife or husband of

¹ Most honours are conferred by the Sovereign on the advice of the Prime Minister; a few, i.e. the Order of Merit, the Royal Victorian Order, the Most Noble Order of the Garter, and the Most Noble and Most Ancient Order of the Thistle, are conferred by the Sovereign personally.

the Sovereign and the four adult persons next in succession to the Crown¹) to whom the Sovereign may delegate by Letters Patent all royal functions except those of dissolving Parliament (which may be done only with the express consent of the Sovereign) and conferring peerages.

Ceremonial

Ceremonial has always been associated with the kings and queens of the British Isles, and in spite of the changes that have taken place with the altered outlook of both the Sovereign and the people, certain customs and usages are the same today as they were many centuries ago. Royal marriages, the birth of royal children and royal funerals are still marked by ancient ceremonial, although to a lesser degree than in former days; and the birthday of the Sovereign, formerly the occasion of many royal and public functions, is today officially celebrated early in June by Trooping the Colour on the Horse Guards Parade. State banquets still take place when a foreign monarch or head of State pays a visit to the United Kingdom; investitures are still held at Buckingham Palace; and royal processions continue to grace such social occasions as the Ascot Race Meeting, known as Royal Ascot, and to add significance to the opening of Parliament, when the Queen drives in state from Buckingham Palace.

The Sovereign is the leader of society by order of general precedence dating from the fourteenth century and sustained until the present day by royal ordinances, ancient usage, established custom and the public will. The Queen's presence at the inauguration of scientific, artistic, industrial, and charitable works of national importance ensures nation-wide interest and support.

PARLIAMENT

The supreme legislative authority in the United Kingdom is the Queen in Parliament, that is to say the Queen and the two Houses of Parliament—the House of Lords and the House of Commons—which together represent all the elements in the nation.

The three sections of Parliament in this sense are outwardly separate: they are constituted on entirely different principles; they do different work in different places and they meet only on occasions of symbolic significance such as the coronation, or the opening of Parliament by the Queen in person, when the Commons are summoned by the Queen to the House of Lords. As a law-making organ of State, however, Parliament is a corporate body and cannot legislate without the concurrence of all its parts (except in the case of measures passed under the Parliament Acts, 1911 and 1949).

The Parliament at Westminster is representative of all the countries of the United Kingdom; it can legislate for all the British Islands, for the United Kingdom, for Great Britain, for England and Wales separately, or for Scotland alone. It is not, however, the only legislature, for the Northern Ireland Parliament has power to legislate in certain spheres, and within the British Islands the ancient legislatures of the two Channel Island Bailiwicks (the States) and of the Isle of Man (the Tynwald) legislate on domestic matters.² Nevertheless, the Parliament at West-

¹ The Regency Act, 1953, provided that Queen Elizabeth, the Queen Mother, should be added to the persons to whom royal functions may be delegated as Counsellors of State.

² The legislatures of the Channel Islands and the Isle of Man consist of the Queen, the Privy Council and the local assemblies. It is the duty of the Home Secretary, as the member of the Privy Council primarily concerned with island affairs, to scrutinise each legislative measure before it becomes law.

minster retains supreme authority, and within practical limits there is nothing that it cannot legally do.

By the passing of the Parliament Act, 1911, the life of a United Kingdom Parliament was fixed at five years (although it is usually dissolved and a general election held before the expiry of the legal term); and since one Parliament cannot bind its successor (for otherwise the succeeding Parliament would not be sovereign or supreme), each assembly has a period of time of up to five years during which it may legislate exactly as it chooses. During its life, it can make or unmake any law; it can destroy by statute the most firmly established convention of the constitution; it can legalise past illegalities and thus reverse the decisions of the courts; and it even has power to prolong its own life by legislative means beyond the normal period of five years without consulting the electorate.

In law, therefore, the supremacy of Parliament is absolute. In practice, Parliament does not exercise its supremacy in this way. In the first place, pressure of business in recent decades has resulted in a large and increasing amount of delegation of legislative authority to ministers and of specific powers to local authorities and to public corporations of various kinds. Powers delegated in this way could, of course, be withdrawn by Parliament, but existing demands on parliamentary time make such a development extremely unlikely. Secondly, the system of party government in the United Kingdom effectively discourages Parliament from acting in too arbitrary a fashion; any parliamentary majority which abused its powers would almost certainly suffer severely at the hands of the electorate.

The Meeting of Parliament

A Parliament, in the sense of a parliamentary period, begins and ends with a proclamation made by the Sovereign on the advice of the Privy Council. Such a proclamation on the one hand dissolves an existing Parliament and, on the other, orders the issue of writs for the election of a new one and appoints the day and place of its meeting.

The resignation of a government usually entails the dissolution of Parliament. Formerly the death of a Sovereign also involved dissolution, since Parliament meets on the personal summons of the monarch. However, since the passing of the Representation of the People Act, 1867, made the duration of Parliament independent of the demise of the Crown, both Houses stand adjourned on such an occasion only until their members have taken the oath of allegiance to the new Sovereign, which occurs immediately after the Accession Council has made the order for proclamation.

The time between the meeting of a Parliament and its prorogation or dissolution is called a session. Parliament is usually prorogued by a commission under the Great Seal (see p. 28), which appoints the day and place of its meeting in a new session. The date so appointed may be brought forward or deferred by a subsequent proclamation. The effect of a prorogation is at once to terminate all business until Parliament is summoned again, when any measures not yet passed must be re-introduced, unless it has been decided that they are to be abandoned.

During the session, either House may adjourn itself on its own motion to such date as it pleases. An adjournment does not affect uncompleted business. A re-assembly of the House can be accelerated either by proclamation or by virtue of powers specially conferred by each House on its Speaker.

The average length of a session is about 160 sitting days, divided by custom into the following periods: one from November until Christmas lasting about 30 sitting days, one from January to Easter of about 50 sitting days, one from Easter until Whitsun of about 30 sitting days, and one from Whitsun until the end of July

lasting about 40 sitting days. Nowadays, the session is usually concluded with a short period of about 10 sitting days in October, after the long summer recess.

The House of Lords

The House of Lords consists of nearly 900 peers, as follows: (1) princes of the royal blood (who nowadays take no active part in proceedings), (2) 26 spiritual lords (the two archbishops and 24 senior bishops of the Church of England), (3) all hereditary peers (other than minors and those who have not proved their right to a writ of summons) of England, Great Britain, and the United Kingdom,¹ (4) 16 hereditary peers of Scotland elected from their own number for each Parliament in accordance with the provisions of the Treaty of Union, 1707, (5) one hereditary peer of Ireland elected for life,² (6) nine Lords of Appeal in Ordinary, appointed under the provisions of the Appellate Jurisdiction Act, 1876, to assist the House in the performance of its judicial functions (see pp. 82 and 85) and holding their seats in the House for life, and (7) a number of life peers (including life peeresses)³ created under the provisions of the Life Peerages Act, 1958.

Temporal peerages (both hereditary and life) are conferred as a mark of distinction by the Sovereign on the advice of the Prime Minister. Hereditary peerages, with the exception of the Scottish and Irish peerages, carry with them, for men over 21 years of age, a right to a seat in the House of Lords, but, according to standing orders promulgated by the House in 1958, holders are asked, at the beginning of each Parliament, whether they will attend the sittings of the House as often as they reasonably can or whether they desire to be relieved of the obligation to attend. If they do so desire, they are requested to apply for leave of absence, either for the duration of the Parliament or for a shorter period, during which they are not expected to attend the House.

Peers in constant attendance at the House of Lords are generally persons of considerable experience, many of whom are elder statesmen and others who have spent their lives in public service. They receive no salary for their parliamentary work, but they are entitled to travelling expenses from their homes to the Palace of Westminster (provided they attend at least one-third of the number of sittings), and (with the exception of the Lord Chancellor, the Lord Chairman of Committees and any member in receipt of a salary as the holder of a ministerial office) they may claim payment for expenses incurred for the purpose of attendance at the House (except for judicial sittings) within a maximum of three guineas a day.

The House of Lords is presided over by the Lord Chancellor, who sits on the woolsack and is *ex officio* Speaker of the House. The Crown, by commission under the Great Seal, appoints several peers to take their place on the woolsack in order of precedence as deputy speakers in the absence of the Lord Chancellor. The first of the deputy speakers is the Lord Chairman of Committees, who is appointed each session and takes the chair in all committees, unless the House otherwise directs. The permanent officers include the Clerk of the Parliaments, who is charged with keeping the records of proceedings and judgments and who pronounces the words of assent to Bills; the Gentleman Usher of the Black Rod, who enforces the orders of the House; and the Serjeant-at-Arms, who attends the Lord Chancellor.

¹ Peerages created between 1707 (the Treaty for the Union of England and Scotland) and 1800 are peerages of Great Britain; those created since the Act for the Union of Great Britain and Ireland, 1800, are peerages of the United Kingdom.

² By the Act for the Union of Great Britain and Ireland, 1800, the Irish peers were entitled to elect 28 representatives, but since 1922 no new peers have been elected.

³ In August 1959, there were 19 life peers, of whom 4 were women.

The House of Commons

The House of Commons is a popular assembly elected by an almost universal adult suffrage and containing members from all sections of the community regardless of income or occupation. There are at present 630 members of the House of Commons (511 for England, 36 for Wales, 71 for Scotland, 12 for Northern Ireland).

Members of the House of Commons receive a salary for their parliamentary work and hold their seats during the life of a Parliament. They are elected either at a general election, which takes place after a Parliament has been dissolved and a new one summoned by the Sovereign, or at a by-election, which is held when a vacancy occurs in the House as a result of the death or resignation of a member, or as a result of the elevation of a member of the House of Commons to the House of Lords.

The chief parliamentary officer of the House of Commons is the Speaker, who is elected by the members as president of the House immediately after a new Parliament is formed. Other parliamentary officers of the House are the Chairman of Ways and Means, and the Deputy-Chairman, both of whom may act as Deputy Speaker; these officers are elected by the House. In addition, there are the party officials, i.e. the Government and Opposition Whips. Non-parliamentary or permanent officers of the House, i.e. those who are not members of Parliament, include the Clerk of the House of Commons, who is charged with such matters as keeping the records, endorsing Bills and signing orders; the Serjeant-at-Arms, who attends the Speaker in the House; and the Chaplain to the Speaker.

Parliamentary Electoral System

For electoral purposes, the United Kingdom is divided into constituencies, each of which returns one member to Parliament. In order that the people shall at all times be equitably represented by this means, permanent Boundary Commissions for England, Scotland, Wales and Northern Ireland (established in 1944) keep constituencies constantly under review and submit periodic reports, either recommending some alteration in boundaries if, for instance, movement of the population has made this necessary, or recommending no change. Changes in the boundaries of constituencies which came into effect for the 1955 General Election increased the number of seats in the House of Commons from 625 to 630.

The law relating to parliamentary elections is contained in three consolidating statutes, the most important of which is the Representation of the People Act, 1949, which repeals and re-enacts in a single statute previous legislation relating to the franchise, the conduct of elections and corrupt and illegal electoral practices. The other Acts are the House of Commons (Redistribution of Seats) Act, 1949, and the Election Commissioners Act, 1949. Under the provisions of these Acts, election to the House of Commons is decided by secret ballot in which all United Kingdom citizens (except members of the House of Lords) and all citizens of the Commonwealth and of the Irish Republic who are resident in the United Kingdom are entitled to vote (although voting is not compulsory), provided that they are 21 years old or over, and unless they suffer any legal incapacity to vote. A register containing the names of all electors is prepared for each constituency and published yearly by registration officers who, in England and Wales, are usually the clerks of local councils, and in Scotland are the lands valuation assessors. Electors normally vote in person at polling stations especially established for the purpose, although members of the armed forces, Crown servants of the United Kingdom employed overseas, and the wives of such persons if resident overseas with their husbands, may vote by proxy. Voting by post, or in certain cases by proxy, may

also be allowed if the voter cannot attend in person for such reasons as illness or the nature of his work. All those whose names are on an electoral register are entitled to stand as candidates for election, unless they are clergy of the Church of England, the Church of Scotland, the Church of Ireland, or the Roman Catholic Church; or are undischarged bankrupts; or fall within one of the categories expressly precluded from standing as candidates under the House of Commons Disqualification Act, 1957, i.e. holders of judicial offices, civil servants, members of the regular armed forces and the police forces, members of the legislature of any country or territory outside the Commonwealth, or holders of other public offices listed in the Act.

Parliamentary Privilege

Both Houses of Parliament enjoy certain privileges and immunities designed to protect them from unnecessary obstruction in carrying out their duties. These privileges apply collectively to both Houses and individually to each member.

In the House of Commons, the Speaker formally claims from the Crown for the Commons 'their ancient and undoubted rights and privileges' at the beginning of each Parliament. These include freedom from arrest in civil proceedings for a period of forty days before to forty days after a session of Parliament; freedom of speech in debate; and the right of access to the Crown, which is a collective privilege of the House. Further privileges include the right of the House to control its own proceedings (so that it is able, on the rare occasions when the public interest so requires, to debate in secret); the right to pronounce upon legal disqualifications for membership and to declare a seat vacant on such grounds; and the right to penalise those who commit a breach of its privileges.

The privileges of the House of Lords are: freedom from civil arrest for peers as for members of the House of Commons; freedom of speech in debate; freedom of access to the Sovereign for each peer individually; and the right to commit for contempt. These privileges are not formally claimed by the Speaker as in the House of Commons; they exist independently without grant.

The Party System

The party system has existed in one form or another since the seventeenth century, and has now become an essential element in the working of the constitution.

The present system is based upon the existence of organised political parties, each laying rival policies before the electorate. Whenever there is a general election, these parties may all put up candidates for election; independent candidates may also stand.¹ The electorate then indicates, by its choice of candidate at the poll on election day, which of the opposing policies it would like to see put into effect.

The party which wins the majority of seats (although not necessarily the majority of votes) at a general election, or which is able to command a majority of supporters in the House of Commons, forms the Government. By tradition, the leader of the majority party is appointed as Prime Minister by the Sovereign, usually on the formal advice of the retiring Prime Minister; and its most outstanding members in the House of Lords and the House of Commons receive ministerial appointments on the advice of the Prime Minister. The largest minority party becomes the official Opposition with its own leader and its own council of discussion or 'shadow

¹ In the general election of May 1955, the choice was between Labour and Conservative in most constituencies. Liberal candidates numbered 110. In a few constituencies, two of the parties agreed to support the same candidate. The number of candidates representing other political parties was very small.

The effectiveness of the party system in Parliament rests to a considerable extent upon the fact that Government and Opposition alike are carried on by agreement: that is to say, the minority agrees that the majority must govern and therefore accepts its decisions; and the majority agrees that the minority should criticise and therefore sets time aside for that criticism to be heard. As far as is compatible with effective government, the Prime Minister meets the convenience of the Leader of the Opposition and the Leader of the Opposition meets the convenience of the Prime Minister. Through the respective Whips there is a measure of agreement on the subjects to be debated and on the time to be allowed; sometimes even on the information to be provided and the proposed line of attack. In this way, Parliament has a chance of hearing a full discussion on policy from every point of view.

Outside Parliament, party control is exercised by the national and local organisations; inside Parliament, it is exercised by the Whips, who in addition to their other functions are expected to maintain the voting strength of their parties. For the Government, this work is done by the Parliamentary Secretary to the Treasury, the Junior Lords of the Treasury, and the political officers of the Household—the Treasurer, the Comptroller and the Vice-Chamberlain. The Opposition Whips have no official position and are not paid from public funds, but their parliamentary duties are the same.

The Functions of Parliament

The main functions of Parliament are (1) to make laws regulating the life of the community, (2) to take formal action, cast in legislative form, to make available finance for the needs of the community and to appropriate the funds necessary for the services of the State, and (3) to criticise and control the Government. By custom, Parliament is also consulted before the ratification of certain international treaties and agreements (in spite of the fact that the making of treaties is a royal prerogative exercised on the advice of the Government which, strictly speaking, is under no obligation to obtain parliamentary approval at all). In practice, there are two types of agreement about which Parliament is consulted; treaties which could not be implemented without legislation; and treaties of such political importance that the Government feels obliged to arrange a debate on the matter before becoming committed. In the case of other treaties requiring ratification, it is customary to presume parliamentary acquiescence unless disapproval is expressed within 21 days from the date on which the treaty was laid before Parliament.

Parliamentary Procedure

Parliamentary procedure¹ is based on forms and rules, many of which date back to the beginning of the sixteenth century and even earlier.

Each House has its own standing orders, but the system of debate is much the same in the two Houses, except that in the House of Commons the Speaker has a much greater measure of control. In the House of Lords, the office of Speaker could be held by a commoner, since the woolsack on which the Lord Chancellor sits as Speaker is technically outside the precincts of the House.² In fact, the holder of the office is always created a peer, but the office carries with it no inherent authority to check or curtail debate. Such matters are decided by the general sense of the House and not by rulings of its Speaker.

¹ A review of House of Commons procedure by a select committee, was published in February 1959 and debated in July 1959.

² When the Lord Chancellor takes part in the debates of the House of Lords (as he frequently does), he moves away from the woolsack.

In the Commons, the Speaker has the prime duty of controlling debate. It is his responsibility to see that parliamentary time is used to the best possible advantage and, therefore, although he must carefully guard against abuse of procedure or any infringement of minority rights, he has power to limit unreasonable obstruction and his rulings on points of order cannot be challenged at the time. It is the duty of the Speaker to allow or disallow a closure motion (i.e. a motion to curtail or end discussion so that the matter may be put to the vote) and generally to enforce the rules of debate of the House. In cases of grave and continuous disorder, he may even adjourn the House or suspend the sitting.

Voting in the House of Commons is carried out under the direction of the Speaker, and it is his duty to pronounce the final result. If an equal number of votes is cast, the Speaker must give the decisive vote; he does this (if possible) in such a way as to avoid change and leave the question to be debated on another occasion. The procedure on voting in the House of Lords is similar to that in the House of Commons, but the Speaker or chairman has no casting vote. With the exception of questions relating to Bills and delegated legislation, the House is governed by the principle that unless there is a majority in favour, the question is decided in the negative. When the House is sitting judicially (see pp. 82 and 85) the question is put in such a way that, if the votes were equal, there would be no interference with the order under appeal.

The Speaker of the House of Commons has the responsibility of deciding whether a Bill is a Money Bill (i.e. a Bill dealing only with national taxation and finance, which comes within the terms of the Parliament Act, 1911); and who, in case of doubt, is the Leader of the Opposition. He is also responsible for such matters as the decision whether a *prima facie* case has been made against persons accused of breach of privilege; the issue of warrants for elections to fill vacancies in the House; and the appointment of the chairmen of the standing committees.

All proceedings of either House are public, except on extremely rare occasions (for example, the war-time secret sessions), and, except on those occasions, a verbatim record is published daily in the official reports, *Parliamentary Debates* (*Hansard*).

Parliamentary Committees

A committee of the whole House is the House itself, presided over by a chairman instead of the Speaker, appointed to consider Bills in detail, clause by clause, and also (in the House of Commons) the resolutions authorising the expenditure of public money. The Committees of Supply and Ways and Means are committees of the whole House of Commons whose chief function is to discharge the financial duties of the House concerning the grant of public money and the levying of taxation.

There are two other main kinds of parliamentary committee, both of which exist to a varying degree to relieve their parent House of some of its more specialised and complex work. They are:

- (1) standing committees, which are appointed by the House of Commons as necessary, for the consideration of Bills and other business committed to them. With the exception of the Scottish Standing and Grand Committees¹ (which deal with Public Bills and other matters relating to Scotland), each standing committee consists of twenty members nominated by the Com-

¹ The Scottish Standing Committee consists of thirty members for Scottish constituencies with up to twenty added members, and the Scottish Grand Committee contains all the members for the Scottish constituencies, together with between ten and fifteen others.

mittee of Selection (a body of eleven members drawn from the three main parties in the House at the beginning of each session) and up to thirty additional members; in all cases the parties are represented in proportion to their numbers in the House. The procedure of a standing committee is generally similar to that of a committee of the whole House; and

- (2) select committees, including joint select committees of both Houses, which are appointed to inquire into and report to the House on special matters, e.g., the Select Committees on Public Accounts, on Estimates, on Statutory Instruments, and on the nationalised industries.

Various other committees exist to deal with Private Bill legislation. There are also a number of unofficial committees, consisting either of one party or of members of all parties, such as study groups concerning themselves with particular issues, e.g., the Parliamentary and Scientific Committee; and parliamentary party committees, e.g., the Labour Policy Committee, and the Conservative and Unionist Members Committee, popularly known as the 1922 Committee—a committee of Conservative members of Parliament, who are neither ministers nor, as a rule, ex-ministers.

Legislation

Legislation can be initiated from either side of the House; but no Bill involving taxation or the spending of public money can proceed very far unless the Government agrees to introduce a 'financial resolution' to cover it. This naturally gives the Government the exclusive right of legislating over a wide field and, as a result, most Public Bills are brought forward in this way. Members can, however, still introduce Bills on their own initiative, and certain days in each session are expressly set aside for this purpose. In addition, persons and bodies outside Parliament can introduce Private Bills relating solely to matters of individual, corporate or local interest.

Bills may be introduced in either House, unless they deal with finance or representation, when they are always introduced in the Commons. As a rule, however, Bills likely to raise political controversy are introduced in the Commons, while legislation of an intricate but non-financial nature is frequently introduced and fully discussed in the Lords before being sent to the Commons, where it can then be dealt with more speedily.

The process of passing a Public Bill is basically the same in the House of Lords as in the House of Commons. The Bill receives a formal First Reading on introduction; it is then printed; and after a period of time (which varies between one and several weeks depending on the nature of the Bill) it may be given a Second Reading as the result of a debate on its general merits or principles. It is then referred for detailed examination (in the Commons) either to a standing committee or, if the House so decides, to the whole House sitting in committee; and, in the Lords, to a committee of the whole House. When the committee stage is finished, the Bill is reported to the House, and a further stage takes place during which the committee's amendments may be altered, additional amendments may be suggested and incorporated, and, if necessary, the Bill may be recommitted to committee. Finally, it is submitted for a Third Reading and, if passed, it is sent on from the Commons to the Lords or from the Lords to the Commons (depending on its place of origin), where it enters on the same course again. Any amendments which the second House makes to the Bill must be agreed to by the first House, or a compromise reached, before the Bill becomes law.

An exception to this procedure is made in the case of some financial Bills, such as the Finance Bill, which authorises annual taxation and amends existing taxation,

and the Appropriation Bill, which authorises expenditure on the Supply Services from the Consolidated Fund. As a general rule, these Bills are introduced in the House of Commons upon resolutions in a committee of the whole House and they may be initiated only by a Minister of the Crown.

When Bills have passed through their various parliamentary stages, they are sent to the Sovereign for Royal Assent, which is now usually given by commission. The Sovereign's right of veto has not been exercised since the early eighteenth century.

The majority of Bills introduced in the House of Lords pass through the Commons without difficulty because of their non-controversial nature; and they are then returned to the Lords to be brought forward for Royal Assent. However, should any Lords Bill be unacceptable to the Commons, it would never reach the Statute Book, for no debating time would be allotted to it—at any rate until a new government came into power, when it might be revived. The Lords, on the other hand are unlikely to be able to prevent a Bill passed in the Commons from becoming law. In the normal course of events, they either accept a Bill from the Commons and return it unchanged; or they revise and improve it by amendments and return it for the consideration of members of the other House, who frequently agree to the amendments made. The Lords cannot require the Commons to agree to amendments; nor can they delay a Bill indefinitely. They have no powers in respect of Money Bills; and since the passing of the Parliament Act, 1949, any other Bill which has been passed by the House of Commons in two successive sessions may be presented for Royal Assent without the consent of the Lords, provided that a year has elapsed between the date of the Second Reading of the Bill in the Commons and the date on which it is finally passed in that House. These limitations to the powers of the Lords are based on the belief that the chief value of the Upper House, which is a non-elected assembly, lies not in thwarting the elected House, but in bringing the wide experience of its members into the legislative process. Proceedings in the House of Lords give time for further reflection, and often elicit new points of view.

Delegated Legislation

Delegated legislation, which is legislation not by Act of Parliament but by Orders in Council, Orders, Warrants, Regulations and Rules, has been part of the parliamentary system for at least six hundred years. Parliament, however, made but sparing use of its power to delegate legislation (except during a period of social, political and economic change in the second half of the fifteenth and most of the sixteenth centuries) until the end of the nineteenth century, when a changing conception of the part to be played by the State in the life of the community made inroads upon parliamentary time and thus caused the system to be adopted on a more extensive scale. With the ever-increasing scope of Government activity during the past sixty years, pressure on parliamentary time has become even more acute; as a result, the system of delegated legislation has become generally accepted, and there are at present few Acts of Parliament which do not contain provisions for its use.

The system of delegated legislation empowers ministers and other authorities to regulate administrative details after a Bill has become an Act. Its advantages are said¹ to be: (1) that it shortens and clarifies Bills before Parliament, thus enabling Parliament to deal with a greater volume of business and to give fuller

¹ From an official minute written in 1893 and quoted in *Concerning English Administrative Law*, by Sir C. T. Carr. Oxford University Press. 1942. pp. 33-34.

A policeman in the city of Durham controls traffic with the aid of closed circuit television.



A probation officer addresses London juvenile court (see p. 83) on behalf of a young offender.

A police sergeant gives a road safety lesson at a junior school in Cambridge.





Her Majesty the Queen opening Parliament on 24th October, 1958.
This was the first occasion on which the ceremony was televised.

attention to matters of policy and principle which are its primary concern; (2) that it encourages flexibility, in that administrative details can be worked out as and when the necessity arises 'with greater care and minuteness, and with better adaptation to local and other special circumstances than they possibly can be during the passage of a Bill through Parliament'; (3) that it is invaluable in an emergency, for it is 'the means by which the legislature can dispense with its own deliberative procedure and arm the executive with power to take immediate action'; and (4) that it provides a speedy, convenient and accurate means of giving effect to the policy of Parliament.

In order to minimise the risk—inherent in the system—that delegated legislative powers might supersede or weaken parliamentary government, such powers are normally delegated to the Queen in Council or to authorities directly responsible to Parliament, i.e. to Ministers of the Crown, to Government departments for which ministers are responsible, or to organisations whose legislation is subject to confirmation or approval by ministers who thereby become responsible to Parliament for it. Moreover the Act which delegates legislative power generally defines the precise limits of this power and, in the more important cases, gives Parliament the right to confirm or annul the statutory instruments¹ by which delegated legislation is enacted. Certain Acts also require direct consultation with organisations which will be affected by delegated legislation before such legislation is made.

The House of Commons is aided in its supervision of delegated legislation by the reports of its Select Committee on Statutory Instruments, which always indicate the unusual or unexpected use of a statutory power.

Parliamentary Control

Parliament's function of controlling the Government in power is exercised in the final analysis by the power of the House of Commons to pass a resolution of 'no confidence' in the Government, or to reject a proposal which the Government considers so vital to its policy that it has made it a 'matter of confidence', and thus to force the Government to resign.

The financial control necessary to ensure that money shall be spent only with the authority of Parliament and for the purposes authorised by Parliament is described in Chapter XII, Finance, pp. 424-7. Methods of general control are provided by:

- (1) the institution of Question Time, which is a daily hour of parliamentary time during which members may question any minister on matters for which that minister is responsible, thus focusing the attention of the public on the day-to-day processes of government;
- (2) the practice whereby the consideration of the Estimates, in Committee of Supply, has ceased to be a consideration of the financial requirements of the Government and has become an occasion, initiated by the Opposition, for the examination of some aspect of the Government's administrative policy which has been included in the Estimates;
- (3) the practice of bringing on a debate later in the same day by moving the adjournment of the House, which is permitted only if the matter is deemed by the Speaker to be definite, urgent, of public importance, and to be the responsibility of the Government, and if 40 members rise in their places to support it, or 10 members rise and the House grants leave on a division;

¹ Statutory instruments are made in accordance with the provisions of the Statutory Instruments Act, 1946, which repealed and replaced the Rules Publication Act, 1893. Instruments of delegated legislation made under the Act of 1893 were known as 'statutory rules and orders' ('S.R. & O.').

- (4) the right of members to raise any matter on the motion for the adjournment of the House at the end of each day's sitting; and
- (5) the power of Parliament to confirm or annul some statutory instruments.

In addition, Government policy and action are fully discussed in the important debates which take place during the proceedings at the opening of Parliament and in the motion for the adjournment of the House before a recess.

Parliament and the Public

The public's interest in the work of Parliament is shown by the queues which form outside the Houses of Parliament for admission to the public galleries, by the growth in the circulation of the daily official report (*Hansard*) which has increased to nearly five times the pre-war figure, and by the large radio audience which listens to two regular BBC programmes: *Today in Parliament*, a fifteen-minute summary of the day's proceedings in both Houses, broadcast each evening when Parliament is sitting; and *The Week in Westminster*, a radio commentary on each week's work, given by members of Parliament from various political parties in turn.

The major news agencies and national newspapers have special parliamentary correspondents to report on parliamentary activities. A television broadcast of the State opening of Parliament was transmitted for the first time in 1958. The Hansard Society for Parliamentary Government, an unofficial non-party educational society, was founded in 1944 to promote interest in parliamentary affairs.

The Northern Ireland Parliament

The Parliament of Northern Ireland consists of the Sovereign, a Senate and a House of Commons. The Sovereign is represented in Northern Ireland by a Governor, who summons, prorogues and dissolves Parliament in Her Majesty's name; the Senate is composed of two *ex officio* senators (the Lord Mayor of Belfast and the Mayor of Londonderry) together with 24 senators elected by the House of Commons according to the principle of proportional representation; and the House of Commons consists of 52 members, elected by a system of parliamentary franchise similar to that which operates in Great Britain. The House, unless sooner dissolved, continues in existence for a period of five years.

The Northern Ireland Parliament has power to make laws for the peace, order and good government of Northern Ireland in relation to all matters except those especially reserved to the Parliament of the United Kingdom, i.e. the Crown or succession to the Crown; foreign relations; defence; the postal services; the judiciary; customs and excise; income and profits taxes; coinage; standards of weights and measures; trade marks; submarine cables; wireless telegraphy; aerial navigation; and lighthouses, buoys and beacons. The Northern Ireland Parliament is also prohibited from making laws which would interfere with religious freedom, and from taking property without compensation.

In consequence of these reservations, provision was made in the Government of Ireland Act, 1920, for the continued representation of the Northern Ireland constituencies in the House of Commons of the United Kingdom; in accordance with this provision, 12 members are returned to Westminster.

THE PRIVY COUNCIL

Until the eighteenth century, the Sovereign in Council, or Privy Council, was the chief source of executive power in the State. As the system of Cabinet government developed, however, the Privy Council declined in importance; many of its

powers were transferred to the Cabinet, and much of its work was handed over to newly created Government departments. The present-day Privy Council exists mainly to give effect to policy decisions made elsewhere.

Apart from Cabinet Ministers, who must be Privy Counsellors and are sworn of the Council on first assuming office, membership of the Privy Council (which is retained for life) is accorded by the Sovereign on the recommendation of the Prime Minister as an honour to persons who have reached eminence in some branch of public affairs in any country of the Commonwealth. In 1959, there were just under 300 Privy Counsellors.

Procedure and Functions

The Privy Council is convened by the Clerk of the Council and presided over by the Sovereign or, in the absence of the Sovereign, by the Lord President.¹ At meetings where the Sovereign is present, three Privy Counsellors form a quorum, but, as a rule, not fewer than four are summoned to attend. The whole Privy Council is called together only on the death of the Sovereign or when the Sovereign announces his or her intention to marry.

The Privy Council is responsible for the making of Orders in Council, of which there are two kinds differing fundamentally in constitutional principle: those made in virtue of the royal prerogative as, for example, when approving the draft of royal instructions to colonial Governors; and those which are authorised by Act of Parliament and are a form of delegated legislation. Members of the Privy Council attending meetings at which Orders in Council are made do not thereby become personally responsible for the policy upon which the orders are based; this rests with the ministers in whose departments the draft orders were framed, whether they are present at the meeting or not. Certain Orders in Council must be published in the *London Gazette*, which is an official periodical published by the authority of the Government.

The Privy Council also advises the Crown on the issue of royal proclamations, some of the most important of which relate to prerogative acts (such as summoning or dissolving Parliament) which are of the same validity as Acts of Parliament.

Committees of the Privy Council

There are a number of Privy Council committees (presided over by the Lord President), whose meetings differ from those of the full Privy Council in that the Sovereign cannot constitutionally be present. These committees have advisory functions: they may be prerogative, such as the committee which deals with legislative matters submitted by the legislatures of the Channel Islands and the Isle of Man for ratification by Order in Council, and the committees for medical research, scientific and industrial research, agricultural research, overseas research, and nature conservation; or they may be provided for by statute as are those for the universities of Oxford and Cambridge and the Scottish universities, and that which deals with applications for the grant of charters to municipal corporations.

The administrative work of the Privy Council committees is carried out in the Privy Council Office under the control of the Lord President. Parts of the work relating to research are undertaken by the Office of the Lord President, since he is responsible to Parliament for the Department of Scientific and Industrial

¹ Since 1660, the office of Lord President has been a political appointment held by a member of the party in power, who is usually a leading member of the Cabinet. In addition to his duties in the Privy Council, the Lord President is free to undertake duties of a general kind.

Research, the Medical Research Council, the Agricultural Research Council, the Overseas Research Council, and the Nature Conservancy, and has a general oversight of scientific matters.

Judicial Committee

The Judicial Committee of the Privy Council is the final court of appeal on certain legal issues arising in Australia and New Zealand and their dependencies, in Ceylon, Ghana, and the Federation of Malaya, and in the United Kingdom dependent territories. Its appellate jurisdiction derives from the principle of English common law which recognises 'the right of all the King's subjects to appeal for redress to the Sovereign in Council' if they believe that the courts of law have failed to do them justice.

Appeals come to it in limited categories of cases where a right of appeal has been specially created, e.g., by Statute, Order in Council or Letters Patent, or by special leave of the Sovereign in Council on the advice of the Judicial Committee. Appeals are heard by a board of three or five drawn from the committee, depending on the significance of the case, the quorum being three. Invitations to sit on the board are issued by the Lord Chancellor, who thus determines which members of the committee shall hear particular appeals. The boards are generally selected from the Lord Chancellor, ex-Lord Chancellors and Lords of Appeal in Ordinary, although Lords Justices of Appeal and other members of the Privy Council who have held high judicial office are also asked to sit when business is heavy. Chief Justices and certain judges from other Commonwealth countries have usually been sworn of the Privy Council and may be invited to sit on the boards.

HER MAJESTY'S GOVERNMENT

Her Majesty's Government is the body of ministers charged for the time being with the administration of national affairs.

Composition

The composition of the Government is subject to variation from time to time, both in the number of ministers and in the titles of some offices. The usual ministerial offices may be classified under the following heads:

1. *The Prime Minister*, who is the recognised head of the Government but has no department.
2. *Departmental Ministers*, some of whom are known as Secretaries of State. There are at present seven Secretaries of State—for the Home Department, Foreign Affairs, Scotland, Commonwealth Relations, Colonies, War, and Air. The more recently created posts usually have the formal title of 'Minister'; and there are Ministers of Agriculture, Fisheries and Food; Defence; Education; Health; Housing and Local Government (also for Welsh Affairs); Labour and National Service; Pensions and National Insurance; Power; Supply; Transport and Civil Aviation; and Works. A few of the older posts have special titles: the Chancellor of the Exchequer (who is responsible for the Treasury and for a number of other financial and central departments); the President of the Board of Trade; the First Lord of the Admiralty; and the Postmaster General.
3. *Non-Departmental Ministers*, or ministers who are the holders of various traditional offices, including the Lord President of the Council, the Lord

Privy Seal, the Chancellor of the Duchy of Lancaster,¹ the Paymaster-General and, at present, a Minister without Portfolio. These ministers have few or no departmental duties and are thus available to perform any special functions which the Prime Minister may wish to entrust to them.

4. *The Lord Chancellor and the Law Officers.* The Lord Chancellor has departmental functions; he is also in a somewhat special position as a Minister of the Crown who is also head of the judiciary in England and Wales. The four Law Officers of the Crown are: for England and Wales, the Attorney-General and the Solicitor-General; for Scotland, the Lord Advocate and the Solicitor-General for Scotland.
5. *Ministers of State*, who are deputy ministers in Government departments where the work is particularly heavy and complex, or when it involves frequent travelling overseas. There are now two Ministers of State in the Foreign Office, one in the Colonial Office, and one at the Board of Trade. In addition, the Secretary of State for Scotland is assisted at ministerial level by a Minister of State, and there is a Minister of State for Welsh Affairs.
6. *Junior Ministers*, who generally have the title of Parliamentary Secretary or, where the senior minister is a Secretary of State, Parliamentary Under-Secretary of State. The primary function of most junior ministers is to relieve their senior ministers of some of their burden by taking part in parliamentary debates and answering parliamentary questions, and by assisting in their departmental duties. The Parliamentary Secretary to the Treasury and the Junior Lords of the Treasury are in a different category as Government Whips.

The Prime Minister is appointed by the Crown, and all senior ministers are appointed by the Crown on the recommendation of the Prime Minister.

The majority of ministers are members of the House of Commons, since the approval of that House is necessary for the general policy (and frequently for the specific proposals) of the Government. There must, however, always be some ministers in the House of Lords, partly because the House of Commons Disqualification Act, 1957, limits the number of ministers who may sit and vote in the Commons while receiving salaries from the Crown, and also because every Government must be assured of spokesmen of standing to expound and justify its intentions and its actions to the House of Lords.

The Prime Minister

The head of the Government became known as the Prime Minister during the eighteenth century. The unique position of authority enjoyed by the holder of this office derives from his status as leader of the majority party in Parliament and from his power to submit his own choice of ministers to the Sovereign and to obtain their resignation or dismissal individually. In modern times, the Prime Minister always holds the office of First Lord Commissioner of the Treasury, and may also hold another portfolio. In April 1957, he became the minister responsible for atomic energy.

It is the duty of the Prime Minister to inform the Sovereign of the general business of the Government; to preside over the Cabinet; and to exercise a general

¹ The Duchy of Lancaster is an inheritance which, since 1399, has always been enjoyed by the reigning Sovereign; it is kept quite apart from his or her other possessions and is separately administered by the Chancellor. In January 1957, the Chancellor of the Duchy of Lancaster became responsible for the co-ordination of the Government Information Services.

supervision over departments, settling departmental differences and approving important departmental decisions where reference to the Cabinet is not required. The Prime Minister speaks for the Government in the House of Commons on the most important topics and answers questions on its general administration in that House.

The Prime Minister's responsibilities include making recommendations for the appointment of Church of England archbishops, bishops and other senior clergy and incumbents of Crown livings, as well as for appointments to high judicial and civil offices such as that of the Lord Chief Justice and certain other judges, Lord Lieutenants of counties,¹ Regius Professors in certain universities and trustees of certain national museums. He also makes recommendations for the award of most civil honours and distinctions.

The Cabinet

The Cabinet is composed of a number of ministers who are selected by the Prime Minister personally. Membership is not fixed, although the holders of certain important ministerial offices are always included; the number of members is now usually less than twenty.

The origins of the Cabinet can be traced back to informal conferences between the Sovereign and his or her leading ministers held in the seventeenth century, independently of the Privy Council. After the Sovereign's withdrawal from an active role in politics in the eighteenth century, and the development of organised political parties stimulated by successive extensions of the franchise from 1832 onwards, the Cabinet assumed its modern form.

The functions of the Cabinet, as defined in the Report of the Machinery of Government Committee (Haldane Committee), 1918, *Cd.* 9230, are: the final determination of the policy to be submitted to Parliament; the supreme control of the national executive in accordance with the policy agreed by Parliament; and the continuous co-ordination and delimitation of the authority of the several departments of State. The Cabinet has no legal authority, however, since its decisions are valid by convention and not by law.

In determining Government policy, whether in the form of proposed legislation for the consideration of Parliament or otherwise, the Cabinet is able to take into account the widest possible range of interests in the country as a whole, by means of an elaborate machinery of consultation, both formal and informal. For the investigation of matters considered to be of the greatest importance, and where time is not of the essence, the procedure frequently adopted is the appointment (by Royal Warrant) of a Royal Commission, whose members are selected on grounds of their wide experience and diverse knowledge of the subject matter under consideration. A Royal Commission examines written and oral evidence from many interested organisations and individuals and, on this evidence, submits a report containing recommendations which the Government may accept in whole or in part, or upon which it may decide to take no further action or to delay action until a later date.

Cabinet Meetings

The Cabinet meets in private and its proceedings are strictly confidential. Its members are bound by their oath as Privy Counsellors not to disclose any information. The Official Secrets Acts forbid the publication of Cabinet as well as of other

¹ The office of Lord Lieutenant in the county was first created in the sixteenth century. Its holder was chief among the county justices and commander of the county militia.

State papers, and a resigning minister desiring to make a statement involving disclosure of Cabinet discussions must first obtain the permission of the Sovereign through the Prime Minister. The theoretical reason for this secrecy is that a Cabinet decision is advice to the Sovereign, whose consent is necessary before the decision is made public. From a practical point of view, secrecy is essential in the interests of unprejudiced debate, which can take place only if there is no risk of publicity for every statement made and every point conceded.

In normal times, the Cabinet meets for a few hours once or twice a week during parliamentary sittings, and rather less frequently when Parliament is not sitting. Additional meetings may be called by the Prime Minister at any time, if a matter urgently requiring discussion should arise. During Cabinet meetings, decisions are reached on major issues of Government policy, and the Cabinet settles any matters which cannot be disposed of at lower levels.

The Cabinet carries on much of its work by means of a committee system which originated in the nineteenth century and has been developed to keep pace with Government business during the past sixty years. The system involves the reference of any issue either to a standing Cabinet committee or to an *ad hoc* committee composed of the ministers primarily concerned, which considers the matter in detail and either disposes of it or reports upon it to the full Cabinet with recommendations for action. Ministers not in the Cabinet are called to attend Cabinet meetings when matters affecting their departments are under discussion; they may also be members of Cabinet committees.

Detailed accounts of Cabinet meetings are not prepared; only the substance of documents submitted, together with a summary of the arguments and the conclusions, are recorded; even these records have a strictly limited circulation. Responsibility for the keeping of records lies with the Secretariat of the Cabinet, known as the Cabinet Office.

Ministerial Responsibility

Ministerial responsibility means both the collective responsibility which ministers share for the policy and actions of the Government and the individual responsibility of ministers to Parliament for the work of their departments.

The doctrine of collective responsibility, which was fully accepted by the middle of the nineteenth century, imposes upon ministers the obligation to act not as individuals but (in the interests of stability of government) as a united group. It does not require every Cabinet minister to be present at every Cabinet meeting; and the obligations of individual ministers may be passive rather than active when the decision to be taken does not relate to their spheres of administrative responsibility. At the same time, every minister should be fully informed of the subject of discussion beforehand, so that if he has any objections he may voice them at the meeting. He may not repudiate, either in Parliament or in his constituency, policies which have received Cabinet approval, nor may he adopt policies that have not been agreed with the other departments concerned (including the Treasury). A minister must also be prepared to vote with the Government on all issues, and where necessary to speak in support or defence of its policy; if he feels himself unable to agree or to compromise with the view of the majority of his colleagues in Parliament or elsewhere he must resign. A minister who does not resign in these circumstances cannot later reject criticism on the ground that he did not personally agree with the policy adopted.

The doctrine of collective responsibility also means that the Cabinet is bound to offer unanimous advice to the Sovereign, even when its members do not hold identical views on a given subject.

The individual responsibility of a minister for the work of his department means that, as political head of that department, he is answerable for all its acts and omissions and must bear the consequences of any defect of administration, any injustice to an individual or any aspect of policy which may be criticised in Parliament, whether he is personally responsible or not. Since the majority of ministers are members of the House of Commons, they are available to answer questions and to defend themselves against criticism in person. Ministers who are in the House of Lords must be represented in the Commons by political subordinates qualified to speak on their behalf, i.e. by their Parliamentary Secretaries and Under-Secretaries. Responsibility, however, cannot be delegated; it remains with the senior minister concerned.

Ministers are expected to take the final decision on all matters relating to their spheres of administration, unless these are of such political importance that Cabinet sanction is required. If any departmental decision brings a minister under fire of criticism in Parliament he may be upheld by the Cabinet, which will then treat the matter as one of confidence in itself; or he may be disowned, when he alone will be liable to lose office.

Ministerial responsibility is an effective way of bringing government under public control, for the knowledge that any departmental action may be reported to and examined in Parliament discourages the taking of arbitrary and ill-considered decisions.

GOVERNMENT DEPARTMENTS

Government departments are organs of Government used to give effect to Government policy when Parliament has passed the necessary legislation. They may and frequently do work with and through local authorities, statutory boards, and Government-sponsored organisations which, while not forming part of Government departments, are under varying degrees of Government control.

As a rule, a change of Government does not immediately affect the number or general functions of Government departments, although a radical change in policy may be accompanied by some change. The widening scope of Government activity in the past half-century has, however, gradually led to the formation of many new departments. A few have existed for over 200 years.

The work of some departments, e.g., the Post Office and the Customs and Excise department, covers the United Kingdom as a whole. Other departments cover Great Britain (England and Wales, and Scotland, but not Northern Ireland), e.g., the Ministry of Labour and National Service; others cover England and Wales only, e.g., the Ministry of Health, and there are similar but separate departments for Scotland and Northern Ireland. Some departments, e.g., the Ministry of Education, make special arrangements for Welsh affairs.

Departments differ in size and in the number, type and complexity of their functions, and some have regional and local offices. Most departments have a minister of their own in control; a very few have no minister responsible to Parliament, e.g., the Exchequer and Audit Department under the Comptroller and Auditor General, who is an officer of Parliament and not of the Government; and some are in charge of ministers who have other duties. For instance, Treasury ministers are responsible for the administration of a number of departments, including H.M. Stationery Office, the Central Office of Information, the Treasury Solicitor's Department, the Department of the Government Actuary, the Royal Mint, the National Debt Office, the Public Works Loan Board, the National Savings Committee and certain museums and art galleries.

ADDENDUM

GENERAL ELECTION 1959 AND CONSEQUENT ADMINISTRATIVE CHANGES

General Election

In the general election, held in the United Kingdom on 8th October, 1959, the Conservative Party was returned to office with a majority of 100 over all other parties. This is the first time, since the establishment of the modern party system in Britain in the nineteenth century, that a party has increased its parliamentary strength in four successive general elections (namely those of 1950, 1951, 1955 and 1959), and the first time that a party has retained office after being in power for the duration of two full Parliaments (1951-55 and 1955-59).

During the election, all 630 constituencies of the United Kingdom were contested and there were 1,536 candidates standing for election. A total of 27,862,708 voters went to the polls, representing 78·7 per cent of the total electorate. The number of votes cast for each party was:

Conservative and supporters	13,750,935
Labour and Co-operative	12,216,166
Liberal	1,640,761
Communist	30,897
Others ¹	223,949

Representation in the House of Commons is as follows:

	<i>Seats Gained</i>
Conservative and supporters	365
Labour and Co-operative	258
Liberal	6
Independent	1

Comparative figures for the general elections of 1945-55 are given on page 34.

Administrative Changes

A number of important administrative changes were made by the Prime Minister when he formed his new Government in October 1959. While these changes do not alter the basic structure of the Cabinet, they have a far-reaching effect on the duties of certain ministers and Government departments.

1. The Lord Privy Seal, as Minister for Science and Technology, has been given the general duty of promoting scientific and technological development. He has thus assumed responsibility for the work of the Atomic Energy Authority (previously held by the Prime Minister) and for that of the Department of Scientific and Industrial Research, the Medical Research Council, the Agricultural Research Council, the Overseas

¹ Including Welsh and Scottish Nationalists, Independent Labour Party, other Independents, Irish Labour, Irish Nationalist, Irish Anti-Partitionist and Sinn Féin.

ADDENDUM

Research Council and the Nature Conservancy (previously held by the Lord President of the Council). The Lord Privy Seal is also responsible for the supervision of Britain's contribution to space research.

2. The former Ministry of Transport and Civil Aviation has been divided into two new ministries: the Ministry of Transport, to which has been transferred responsibility for the shipbuilding and ship repairing industry hitherto held by the Admiralty; and the Ministry of Aviation. The Minister of Aviation has assumed responsibility not only for civil aviation, but also for research, development and production of aircraft (both civil and military), guided and atomic weapons, radar and electronics, previously controlled by the Minister of Supply.
3. The Ministry of Supply has been abolished. Those of its responsibilities which are not now exercised by the Ministry of Aviation are mainly concerned with the control of munitions and Royal Ordnance factories, and have been transferred to the War Office.
4. The Ministry of Labour and National Service is now the Ministry of Labour.

Readers should note that the sections of the Handbook principally affected by these changes are: chapter II pp. 41-3, 48, 55, 58-60; chapter III pp. 109, 111, 114-7; chapter VII pp. 207-20; chapter IX pp. 256, 258, 259, 337; and chapter X pp. 358-65, 370, 379-85.

This section provides an outline of the principal functions of the main Government departments. Since much of their work is interconnected, they are not grouped according to the subjects with which they deal, but are arranged in alphabetical order, except for the Cabinet Office and the Treasury (which, in view of their central position, are placed first) and the Scottish and Northern Ireland departments, which are grouped at the end of the section. Further information on the work undertaken by the various departments is given in later sections of this handbook under the relevant subject headings.

The Cabinet Office

The Cabinet Office, or Secretariat of the Cabinet, was introduced as an emergency institution during the first world war and has grown into an organ of great importance in the co-ordination of policy at the highest level. The secretariat is responsible for the keeping of Cabinet records, for providing information and advice to ministers, and for issuing directives or promulgating the decisions of the Cabinet or the Prime Minister to the departments concerned. It has a military side and a civil side. Attached to the Cabinet Office is the *Central Statistical Office*, which is charged with the collection, analysis and presentation of statistics relating to the national economy.

The Treasury

Nominally the heads of the Treasury are the Lords Commissioners: the First Lord of the Treasury (now always the Prime Minister), the Chancellor of the Exchequer and five Junior Lords. In practice, the Lords Commissioners never meet as a board and their responsibilities are carried by the Chancellor of the Exchequer assisted by two junior ministers, the Financial Secretary and the Economic Secretary. There is also a Parliamentary Secretary to the Treasury, who is the Chief Government Whip in the House of Commons.

The functions of the Treasury fall under four main headings: finance (subdivided into home finance and overseas finance), control of expenditure, general civil service establishment matters, and co-ordination of economic policy. Home finance includes taxation policy (though executive responsibility for the collection of revenue lies with the Board of Inland Revenue and the Department of Customs and Excise), the provision of funds for the day-to-day needs of the public services, currency and banking, and the management of the national debt. The Treasury has been heavily occupied with overseas financial questions since the end of the second world war because of the post-war emphasis on the problem of the balance of payments.

Control of expenditure is a matter partly for Government departments and partly for the Treasury, which scrutinises the detailed annual Estimates and exercises a general supervision over departmental expenditure, subject always to the overriding control and authority of Parliament. The Treasury's responsibility in general civil service questions has developed gradually out of the control of expenditure.

The co-ordination of economic policy is a function which the Treasury has acquired since the end of the second world war. It arose from the acceptance by successive Governments of responsibility for maintaining full employment, safeguarding the balance of payments and avoiding inflation.

Parliamentary Counsel to the Treasury. The Office of the Parliamentary Counsel is responsible for the drafting of all Government Bills, except those Bills or provisions of Bills extending exclusively to Scotland, which are handled by the Lord Advocate's Department. The office drafts all financial and other parliamentary resolutions and

amendments moved by the Government during the passage of Bills through Parliament; it advises departments on questions of parliamentary procedure; and it attends sittings of both Houses of Parliament, and their committees. In addition, the Office of the Parliamentary Counsel drafts subordinate legislation when instructed, and advises the Government on legal, parliamentary and constitutional questions falling within its special experience.

The Admiralty

The Admiralty Act of 1690 appointed Lords Commissioners to the Board of Admiralty to execute the office of Lord High Admiral. The responsibilities of the Board of Admiralty are, briefly, to build, direct, maintain and administer the Royal Navy within the framework of the Government's naval defence policy. The present Board of Admiralty comprises ten members (three ministerial, six naval and one civil servant); the First Lord is the ministerial head of the department and the other members are responsible to him for specific duties. The Board of Admiralty is served by three departmental groups: (1) the divisions of the naval staff, responsible for advising on general and technical policy, strategy, tactics, operational planning, the disposition of the Fleet, methods of naval warfare, and material requirements; (2) the departments responsible for advising on personnel and material policy, for providing the men (and their training), the ships (including their weapons and equipment) and supplies, for the general organisation and administration of associated naval establishments at home and abroad, and for stating (to the Ministry of Supply) naval aircraft requirements; and (3) the secretariat branches, which co-ordinate business, provide advice on precedent and on general Government policy, ensure financial regularity and receive, pay and account for all money administered by the department.

The Admiralty has responsibilities for the merchant shipbuilding and repair industry, and advises on the Government's economic policy in the industry. Much of the research work undertaken to meet naval requirements has additional civil applications. The Admiralty administers the Royal Greenwich Observatory and the National Institute of Oceanography.

The Ministry of Agriculture, Fisheries and Food

The Ministry of Agriculture, Fisheries and Food was established by Order in Council in April 1955 and assumed the responsibilities previously discharged by the Ministry of Agriculture and Fisheries and the Ministry of Food.

The ministry is responsible generally for the efficiency of the agricultural, horticultural and fishing industries in England and Wales. In this connection it keeps in touch with local farming opinion through the county agricultural executive committees, and is concerned with the provision of technical advisory services, measures to promote improvements in the quality of livestock, agricultural and fisheries produce, matters affecting agricultural labour, and marketing schemes. It administers the production grants for the improvement of farm land, buildings, equipment, and livestock, and the price guarantees to farmers under the Agriculture Acts, 1947 and 1957. With other Government departments it is concerned with improvements (in rural areas) to such services as the provision of farm buildings, water supplies and electricity; with the supply of machinery, fertilisers and seeds; and with various aspects of land use.

Throughout Great Britain, the department is in operational control of epidemic diseases of animals and of plant diseases and pests, and it has general responsibility for food supplies, both home produced and imported, for food manufacture, distribution and storage, for identifying problems for food research, for the

conduct of the National Food Survey, and for administering part of the food and drugs legislation—in particular that part relating to the composition of food, labelling and advertising, and the cleanliness and quality of milk.

The ministry maintains relations with other Commonwealth and foreign countries interested in the United Kingdom as a market for their food exports, and is responsible for schemes such as the Commonwealth Sugar Agreement, which is operated through the Sugar Board. It contributes to the work of such international bodies as the Food and Agriculture Organisation of the United Nations, the Organisation for European Economic Co-operation, the Economic Commission for Europe, and, for food defence planning purposes, the North Atlantic Treaty Organisation.

The ministry is also responsible for the administration of the Royal Botanic Gardens, Kew.

Ordnance Survey Department. The control of the Ordnance Survey Department was transferred from the War Office to the Office of Works as the importance of its civil work outstripped that of the military purposes for which it had been founded in 1791. It is now generally administered by the Ministry of Agriculture, Fisheries and Food, although it is itself responsible for its day-to-day affairs. The department carries out land registry surveys, and produces a wide range of maps for the Admiralty, War Office, Air Ministry, and Geological Survey.

The Air Ministry

The Air Council was established by Order in Council in 1918 according to provisions of the Air Force Constitution Act, 1917, which authorised the absorption of the Royal Naval Air Service and Royal Flying Corps into the Royal Air Force (RAF) under the administrative control of an Air Council presided over by a Secretary of State.

The present Air Council comprises eight members—two ministerial, five air force and one civil servant. Its president is the Secretary of State for Air and the other members are responsible to him for specific duties. The Air Council is served by four departments, which together form the Air Ministry. The departments are: (1) the department of the Chief of Air Staff, responsible for policy, planning and the fighting efficiency of the RAF; advice on the conduct of operations and the issue of operational orders; operational requirements, flying training, ground combat, navigational, command and staff training; defence, including the use of guided weapons; operational and defence research; flight safety; (2) the department of the Air Member for Personnel, responsible for all matters in connection with the personnel of the RAF (except training and establishments); (3) the department of the Air Member for Supply and Organisation, responsible for organisation of the RAF in peace and war; establishment of personnel, aircraft, marine craft and mechanical transport; transportation; works and technical services; technical training; engineering; supply services; work study; and (4) the department of the Permanent Under-Secretary of State for Air, responsible for general control and co-ordination of Air Ministry procedure and the conduct of official business; control of expenditure; establishment of Air Ministry headquarters and outstations and all civilian staff matters; parliamentary and legal business; and the general administration of the Meteorological Office.

The supply of airframes, aero engines, and certain other weapons and equipment is arranged through the Ministry of Supply.

The Meteorological Office, for which the Air Ministry became responsible in 1920, provides meteorological services for the general public, Government departments,

the armed forces, shipping and civil aviation. It organises meteorological observations in the United Kingdom and at certain stations overseas and undertakes the collection, publication and distribution of meteorological information from all parts of the world. It also undertakes meteorological and climatological research.

The Colonial Office

The Colonial Office deals with the affairs of the great majority of the non-self-governing countries of the Commonwealth. At the head of the Colonial Office is the Secretary of State for the Colonies, who is the minister responsible to Parliament for the general administration of those territories. The main functions of the Colonial Office are to convey to the governments of the dependent territories the views and wishes of the United Kingdom Government on broad matters of policy and to provide them with guidance on a wide range of matters through a staff of professional advisers and with the help of advisory committees composed of men and women eminent in many fields. The department is also responsible for ensuring that the interests of governments and peoples of the dependent territories are safeguarded and promoted, and for undertaking expert service of many kinds, including the allocation of funds for development purposes under the Colonial Development and Welfare Acts and the provision of administrative and professional staff for the Overseas Civil Service. Other functions of the Colonial Office include the care of students from the dependent territories in the United Kingdom, the British Council acting as agent in providing for their general welfare.

The Colonial Office does not directly administer the territories with which it deals. Each of these has its own administration and an increasing measure of autonomy.

Her Majesty's Overseas Civil Service. Members of this service (recruitment for which is in the hands of the Secretary of State for the Colonies) are employed in the public services of colonial overseas territories and are paid by the government of the territory in which they serve. The service merges the administrative and professional branches of the former Colonial Service. Its members are eligible to be considered for employment in any post which the Secretary of State for the Colonies is requested or authorised to fill, and may also be considered, as opportunity offers, for any post in Commonwealth or foreign territories for which the United Kingdom Government may be invited to recommend candidates. Recruitment into this service is undertaken in the United Kingdom and other Commonwealth countries when suitably qualified local candidates are not available for appointment to the territorial public service.

The Crown Agents for Oversea Governments and Administrations, while not constituting a Government department, are appointed by the Secretary of State for the Colonies to act as commercial and financial agents in the United Kingdom for the governments of the territories for which he is responsible. They also act by special arrangement for other governments and bodies.

The Commonwealth Relations Office

The Commonwealth Relations Office, known between 1925 (when it was first established as a separate Government department) and 1947 as the Dominions Office, links the United Kingdom Government—by consultation and exchange of information on all subjects of mutual interest, including foreign affairs, defence co-operation and economic matters—with the Governments of the other member nations of the Commonwealth (Canada, Australia, New Zealand, the Union of South Africa, India, Pakistan, Ceylon, Ghana, and the Federation of Malaya), with

the Federation of Rhodesia and Nyasaland, and with the self-governing colony of Southern Rhodesia. Similar relations with the Irish Republic (which, although no longer a member of the Commonwealth, is not treated as a foreign country) are maintained through the Secretary of State for Commonwealth Relations, who is also responsible for the administration of the South African High Commission Territories (Basutoland, the Bechuanaland Protectorate and Swaziland).

The Customs and Excise Department

Commissioners to collect the customs and the excise revenues were first appointed by the Long Parliament in 1643 (although after the Restoration the older method of collection through private contractors was revived for a time). The two branches of the revenue remained distinct until 1909, when they were amalgamated under Commissioners of Customs and Excise. The primary work of the Customs and Excise Department is to collect and administer the duties of customs and excise imposed from time to time in the annual Finance Acts or by other legislation, and to advise the Chancellor of the Exchequer on any matters connected with them. The department is also responsible for preventing and detecting evasion of the revenue laws, including smuggling and illicit distillation.

In addition to its revenue work, the department undertakes a wide range of non-revenue agency work for other departments, e.g., the enforcement of prohibitions and restrictions on the importation and exportation of certain classes of goods, exchange currency control, and the compilation of United Kingdom overseas trade statistics from customs import and export documents.

The Ministry of Defence

The Ministry of Defence was formally constituted in January 1947 following the passing of the Ministry of Defence Act, 1946. The Act charges the minister with responsibility for 'the formulation and general application of a unified policy relating to the armed forces of the Crown as a whole and their requirements'. He carries out this responsibility in accordance with general defence policy laid down by the Cabinet.

In addition to its main function of co-ordinating the policies and requirements of the armed Services, the ministry is responsible for the administration of the Joint Intelligence Bureau, the Imperial Defence College, the Joint Services Staff College and Amphibious Warfare Headquarters.

The Ministry of Defence also has responsibilities arising from United Kingdom participation in international defence organisations.

The Ministry of Education

The Ministry of Education was established in 1944 to take over the powers and duties previously exercised by the Board of Education (1899-1944) in regard to the promotion of the education of the people of England and Wales and of the progressive development of institutions devoted to that purpose. The ministry exercises this function in co-operation with the local education authorities—the councils of the counties and of the county boroughs—whose duty it is to secure adequate facilities for all forms of education in their areas. On professional matters, contact with the local education authorities is maintained through Her Majesty's Inspectorate of Schools, which is organised in regional divisions throughout England and Wales for its work of inspection, liaison and advice. A separate Welsh Department of the Ministry of Education deals with education in Wales.

The ministry is concerned with the development of primary, secondary and further education, including vocational education and education for leisure and

the social and physical training of young people. It deals with the supply, training and superannuation of teachers; the building of new schools and other institutions; the school health service; the special educational treatment of handicapped children; and the provision of school meals and milk. It is responsible for the award of State scholarships and other awards for university students; for the administration of the Victoria and Albert Museum and the Science Museum, London; and for the maintenance of educational relations with other countries of the Commonwealth, with foreign countries, and with the United Nations Educational, Scientific and Cultural Organisation.

The Commonwealth Institute. The institute was founded (as the Imperial Institute) in 1893. Its work is now directed by a board of governors, some of whom are appointed by the Minister of Education and others by the Governments of the member nations of the Commonwealth. The institute houses permanent exhibitions of the peoples and products of the Commonwealth, shows films on Commonwealth subjects, and does much educational work in co-operation with the schools. It also arranges lectures and conferences and has study and recreational accommodation for Commonwealth students. The institute is financially dependent on an endowment fund and on grants from the United Kingdom and other Commonwealth Governments. A new building to house the institute is due to be completed in 1962.

The Foreign Office

The Foreign Office, which is the headquarters of the Foreign Service,¹ first became a separate department of State in 1782. The minister in charge of the Foreign Office, and responsible to Parliament for the conduct of foreign affairs and for the direction and operation of the Foreign Service, is the Secretary of State for Foreign Affairs.

The Foreign Office acts as a channel of communication between the United Kingdom Government and the Governments of foreign States, either through the representatives of foreign States in the United Kingdom or through Her Majesty's representatives abroad, for the discussion and negotiation of all matters falling within the field of international relations, including the drawing up of international treaties and agreements. It also provides the means by which the United Kingdom Government is represented in the United Nations and on other international bodies and is kept informed of developments in foreign countries; by which British subjects and interests abroad are protected and trade promoted; and by which British policy is explained to foreign Governments and peoples. The questions dealt with by the Foreign Office are primarily of a political nature, but they also include many other matters such as questions of nationality, the issue and renewal of passports, and the immunities and privileges of foreign diplomatic representatives.

The Forestry Commission

The Forestry Commission, which was established as the national forest authority with its own annual Vote in Estimates by the Forestry Act, 1919, is responsible under the Forestry Acts, 1919-51, for promoting the interests of forestry, the development of afforestation, and the production and supply of timber in Great Britain, and for maintaining reserves of growing trees, through a system of licensed felling.

The Minister of Agriculture, Fisheries and Food is responsible for forest policy in England and Wales, and the Secretary of State for Scotland in Scotland.

¹ See p. 66

The General Register Office

The General Register Office is responsible under the Registrar General for the regulation of civil marriages and for the administration of civil registration in England and Wales, for the preparation of statistics and reports relating to population, fertility, births, marriages, adoptions, diseases and deaths, and for making arrangements for the periodic census of the population. Responsibility to Parliament rests with the Ministry of Health.

The Ministry of Health

The Ministry of Health was created in 1919. Its main functions are the administration, in England and Wales, of the National Health Service under the National Health Service Acts, and the supervision of the work of local authorities under certain sections of the Public Health Acts and of their services in connection with mental illness, and for the care of the aged, infirm, blind, deaf and other handicapped persons under the National Assistance Act, 1948.

The Ministry of Health is also concerned with the medical and surgical treatment of war pensioners in England and Wales, the Channel Islands and the Isle of Man and those living in the Irish Republic. Its other responsibilities relate to food hygiene and welfare foods.

The exercise of the department's functions in Wales has been delegated to the Welsh Board of Health, the members of which are appointed by the Minister of Health.

The Ministry of Health is represented on the World Health Organisation of the United Nations.

The Home Office

The Home Office was created in 1782. Its head is the Secretary of State for the Home Department (the Home Secretary), who is entrusted with all the responsibilities of national administration which have not been especially assigned by law or convention to another minister. The Home Secretary is the channel of communication between the Sovereign and his or her subjects, and between the United Kingdom Government and the Governments of Northern Ireland, the Channel Islands and the Isle of Man.

The chief matters with which the Home Office is concerned are: the maintenance of law and order; the efficiency of the police service; the treatment of offenders, including juvenile offenders; the efficacy of the probation service; the organisation of magistrates' courts; the introduction of legislation on criminal justice; the efficiency of the fire service; the care of children by local authorities and voluntary organisations; the regulation of the employment of children and young persons; the law relating to the conduct of parliamentary and local government elections; public safety and preparations for civil defence; the control and naturalisation of aliens; and general questions and individual cases relating to British nationality and citizenship of the United Kingdom and Colonies.

Particular matters for which the Home Office is responsible, both in connection with its general functions and otherwise, include: receiving and submitting addresses and petitions to the Sovereign and preparing presentations to Parliament; preparing patents of nobility for peers and formal proceedings for the bestowal of honours; advising the Crown on the exercise of the prerogative of mercy; making and receiving requests for the extradition of criminals; sanctioning by-laws made by local authorities in so far as they relate to 'law and order' and 'good governance'; granting licences to experiment with animals; ordering the exhumation and removal of bodies; supervising the control of explosives, firearms

and dangerous drugs; and administering the State Management Scheme for control of the liquor trade in the Carlisle district.

The Ministry of Housing and Local Government

The Ministry of Housing and Local Government is generally responsible for local government in England and Wales, and exercises powers in regard to housing, town and country planning, water, sewerage, and other services administered by local authorities. It is also responsible for sanctioning loans for most purposes for which local authorities require to borrow money, and for acting as the main link between local authorities and the central Government.

As the central housing authority under the Housing Act, 1936, the Minister of Housing and Local Government supervises the administration of the housing statutes and the national housing programme; and his officers keep in close touch with the local authorities in England and Wales. Local authority proposals for dealing with slum clearance are also submitted to the minister.

The town and country planning work of the ministry includes the framing and execution of the national policy on the use and development of land for the purpose of achieving the best use of land in the public interest. The responsibilities of the minister include confirmation of the acquisition and disposal of land by local authorities; and the payment of grants, for planning purposes, in certain cases of acquisition, clearing and compensation. The minister also has responsibilities in connection with the establishment and work of the Development Corporations of the new towns, and with the National Parks Commission.

The Minister of Housing and Local Government is also the Minister for Welsh Affairs.

The Central Office of Information

The Central Office of Information was established in 1946 as the successor to the war-time Ministry of Information. It is a common service agency for producing and advising on information and publicity material and for supplying general publicity services required by Government departments. It produces and distributes books, pamphlets, magazines, films (including films for television), exhibitions, photographs and other visual material for the home and overseas ministerial departments. In the United Kingdom, it conducts all Government press and poster advertising except that of the National Savings Committee, carries out social surveys, and distributes departmental press notices to the press, the BBC and the television companies. For the overseas departments, it also supplies British information posts abroad with a daily service of topical information, comment and official news for local circulation and other material for the press and radio, and with a comprehensive reference service, and arranges tours for official visitors from overseas to enable them to see various aspects of life in Britain. Administratively, the Central Office of Information is responsible to the Treasury ministers, while the ministers whose departments it serves are responsible for the policy expressed in its work.

The Board of Inland Revenue

The Board of Inland Revenue administers the laws relating to income tax and surtax, profits tax, stamp duty, estate duty, and certain other direct taxes of lesser importance; and advises the Chancellor of the Exchequer on any matters connected with them. It is also responsible for the valuation of real property for various purposes such as compensation for compulsory purchase, local rates in England and Wales, and estate duty.

The Ministry of Labour and National Service

The Ministry of Labour was created in 1916. In 1939, when it became responsible for manpower, both for the armed forces and for industry, its name was changed to the Ministry of Labour and National Service.

In relation to manpower policy, the ministry co-operates with other Government departments on matters of general employment policy, including the distribution of industry and the maintenance of a high and stable level of employment. One of its principal functions is the administration of the Employment and Training Act, 1948, under which it provides facilities and services for vocational guidance and training, helps workers to obtain and retain employment suitable to their age and capacity, and assists employers to obtain suitable employees. The ministry's services include the operation of (1) a national system of employment exchanges, (2) the Technical and Scientific Register, (3) nursing appointments offices and (4) Government schemes for vocational training. It is also concerned with the central administration of the Youth Employment Service, and provides the Disablement Resettlement Service to enable disabled persons to secure employment.

Other functions of the department include: the registration, medical examination and call-up of men for National Service and the resettlement in civilian employment of men released from National Service or from the regular armed forces; the supervision, through the Inspectorate of Factories, of safety, health and welfare measures for industrial workers; the collection and publication of labour statistics of all kinds; the promotion of good industrial relations; and the provision of services for conciliation, arbitration and investigation in industrial disputes.

Responsibility for the relations of the United Kingdom Government with the International Labour Organisation rests with the ministry, which is also concerned with labour policy in the international field, with overseas questions concerning labour and employment and with the employment of foreign workers in Great Britain.

Besides these principal functions, the ministry undertakes agency work for other Government departments in connection with National Insurance, National Assistance, repayment of income tax to unemployed persons, and the issue of passports.

The Law Officers' Department

The Law Officers of the Crown for England and Wales (the Attorney-General and the Solicitor-General) are appointed from among the more distinguished members of the English Bar. They are always members of the House of Commons.

The Law Officers are the principal legal advisers to the Sovereign in his or her private capacity, to the Government, and to Government departments; and they appear in court as counsel on behalf of the Crown in important cases. In addition, the Attorney-General is responsible for superintending the work of the Director of Public Prosecutions; his consent is required to the institution of criminal proceedings for certain offences; and he has unfettered power (exercised only in exceptional cases) to stay criminal proceedings in the superior courts. The Solicitor-General, as the Attorney-General's deputy, acts for him in all cases where he is authorised or required to do so. The Law Officers are assisted by a small professional staff.

The Lord Chancellor's Departments

The Chancellorship is a legislative, judicial and executive office held by an eminent ex-member of the Bench or of the Bar; it always carries Cabinet rank in peace time.

In addition to his functions as Speaker of the House of Lords and Custodian of the Great Seal, the Lord Chancellor is in charge of more than 20 different offices and branches which are mainly concerned with legal practice and procedure. He controls the machinery of the courts of law both through his patronage and through administrative powers conferred by the Judicature Act, 1925, and other Acts; he advises the Crown on many appointments to the judiciary in England and Wales; and he is the minister responsible for the Judge Advocate General's Department. This department advises the War Office and the Air Ministry on all legal matters arising out of the administration of military law, and, where necessary, reviews the proceedings of army and air force courts martial.¹ The Lord Chancellor is also a member of the Judicial Committee of the Privy Council and exercises ecclesiastical patronage. Under the Tribunals and Inquiries Act, 1958, he appoints the chairmen of certain administrative tribunals in England and Wales, and (with the Secretary of State for Scotland) the members of the Council on Tribunals. The Land Registry (which is responsible for maintaining a State register of title to land), the Public Trustee Office (which may act as the executor or administrator of the estate of a deceased person or as a trustee under a will or settlement) and the Public Record Office (which preserves, and provides access to, the national archives) are administered under the Lord Chancellor.

The National Assistance Board

The National Assistance Board is responsible to Parliament through the Minister of Pensions and National Insurance. It administers the State service of financial assistance to persons in need and unable to maintain themselves, and the non-contributory pension scheme under the Old Age Pensions Act, 1936, and is responsible for assessing the means of persons applying for legal aid.

The Paymaster-General's Office

The Paymaster-General's Office acts generally as a banker for most Government departments, money granted by Parliament to meet departmental expenditure (other than the expenditure of the Board of Inland Revenue, the Customs and Excise Department and the Post Office, for which separate arrangements exist) being transferred (in such sums as may be required from day to day) from the Exchequer account to the account of the Paymaster-General at the Bank of England. Most departmental payments are made by means of payable orders drawn on the Paymaster-General's Office; these are similar to cheques, and their recipients obtain payment through the commercial banks, whose accounts at the Bank of England are in turn reimbursed by the Paymaster-General's Office.

The department is also responsible for the regular payment of many public service pensions, including those of civil servants, teachers, and members of the National Health Service, as well as the retired pay and pensions of officers of the armed forces, their widows and dependants.

The Ministry of Pensions and National Insurance

In 1953 the Ministry of Pensions (established in 1917) and the Ministry of National Insurance (established in 1944) were amalgamated and became the Ministry of Pensions and National Insurance. The ministry is responsible (1) for the social security services established since the second world war by the Family Allowances Acts, the National Insurance Acts and the National Insurance (Industrial Injuries) Acts, and for reciprocal social security arrangements with other countries,

¹ The Judge Advocate of the Fleet is responsible for these matters in the Royal Navy.

and (2) for the award and payment of war pensions and allowances for disablement and death due to service in the armed forces of the Crown or in the Home Guard (now disbanded), or due to war injuries sustained by naval auxiliaries, merchant seamen, civil defence personnel and civilians in the second world war, and for the welfare of pensioners and their dependants and war orphans. In addition to these responsibilities for war pensioners in the United Kingdom and in the Irish Republic, the ministry is responsible for the administration of war pensions and for the medical treatment of war disablement of United Kingdom pensioners living in Northern Ireland and, through its various agencies, in other countries overseas. The ministry maintains an office in Ottawa to serve pensioners in North America.

The Post Office

The Post Office was set up in the seventeenth century to take over the responsibility for carrying letters, which was previously attached to the Crown. The minister at its head is the Postmaster General, and its work is now mainly concerned with the operation of the inland postal, telegraph and telephone services and, in co-operation with other countries and interests, of the overseas postal and telecommunications services. A considerable volume of scientific research and technical development relating to telephone, telegraph and radio systems and the mechanisation of the postal services is carried out by the engineering staff of the Post Office.

In addition to its other work, the Post Office undertakes certain banking functions, including the operation of the Post Office Savings Bank, the sale of premium savings bonds and the issue of money orders, and it acts as an agent for many other Government departments in the collection of revenue (e.g., by the sale of broadcast receiving and other licences and by the sale of stamps for National Insurance contributions) and the payment of grants and allowances, such as National Insurance payments, retirement and certain other pensions and family allowances.

The Postmaster General is the minister responsible to Parliament for broad questions of national policy concerning the sound and television broadcasting services. The Post Office provides many line facilities for the British Broadcasting Corporation and the Independent Television Authority.

The Ministry of Power

The Ministry of Power was established in 1942 (as the Ministry of Fuel and Power) when it absorbed the former Mines and Petroleum Departments of the Board of Trade and the Board's functions in relation to gas and electricity. It was made permanent by the Ministry of Fuel and Power Act, 1945, its title being changed to Ministry of Power by Order in Council in 1957.

Since 1942, the ministry has had the general duty of ensuring the effective and co-ordinated development of fuel and power supplies in Great Britain, and of promoting economy and efficiency in their distribution and consumption. The business of producing and distributing gas and electricity and of producing coal is operated by the boards of the three nationalised industries, whose members are responsible to the minister on policy issues. The ministry is also responsible for Government relations with the petroleum industry; it has certain functions in relation to the iron and steel industries; and it is specifically responsible for the use of atomic energy as a source of industrial power.

The ministry is concerned with the general co-ordination of fuel research; it administers the legislation governing the safety and health of workers in or about coal mines, metalliferous mines and quarries, and it conducts or arranges for research on these matters and on other specific projects.

The Department of the Procurator General and Treasury Solicitor

The Treasury Solicitor provides a common legal service for a large number of Government departments in England and Wales; the duties of his department include drafting and preparing litigation and prosecutions, representing departments in court, and giving general advice on the interpretation and application of the law. It also undertakes a considerable amount of conveyancing connected with the transfer of real property and with the administration of the residuary estates (undisposed of by will) of certain deceased persons, and it deals with the outstanding property and rights of dissolved companies.

Some Government departments are wholly dependent on the Treasury Solicitor for their legal work; others have their own legal staffs for a proportion of the work and draw on the Treasury Solicitor for special advice and, often, for conveyancing; and others, whose administrative work is based on or deals with a code of specialised law or involves a great deal of legal work, have their own independent legal sections.

The Treasury Solicitor is also Procurator General (Queen's Proctor) and in that capacity has certain duties connected with the operation of the divorce laws.

The Department of Scientific and Industrial Research

The Department of Scientific and Industrial Research was set up as a department of the Privy Council in 1916. It accounts for its own Vote in the Estimates and is responsible to Parliament through the Lord President of the Council.

The work of the department covers research in the United Kingdom (except defence research) in all branches of natural science except medicine and atomic energy, and in all industries except agriculture, fisheries and forestry. Its primary functions are to undertake research in the national interest for the benefit of the community and to meet the requirements of other Government departments; to encourage research and the application of scientific knowledge in industry; and to encourage fundamental research at universities and elsewhere, and the maintenance of an adequate supply of trained research workers for laboratories of all kinds.

The Stationery Office

Her Majesty's Stationery Office was established in 1786. It is the Government's central organisation for the supply of desk stationery, office equipment, office machinery, printed matter, published books and periodicals for British Government departments at home and abroad. It also undertakes printing, duplicating, addressing and distributing services for other departments. The Stationery Office is the Government publisher and is responsible for the sale of Government publications, including Acts of Parliament. The ministerial head of the Stationery Office is the Chancellor of the Exchequer, and questions pertaining to the department asked in the House of Commons are normally answered by the Financial Secretary to the Treasury.

The Ministry of Supply

The Ministry of Supply was formed in 1946 by the amalgamation of the war-time Ministries of Supply and of Aircraft Production.

The ministry is responsible for furnishing supplies, which include complete atomic weapons, to the armed forces; it undertakes research on, and the design and development of, equipment for these forces, principally for the Army and Royal Air Force, but including aircraft, vehicles, some guns and ammunition and other equipment for the Royal Navy. The ministry is also responsible for certain aspects of the electronics and light metals industries, and for research on,

and development and production of, certain classes of equipment for civil use, e.g., civil aircraft and industrial gas turbines.

The ministry controls the Royal Ordnance factories and its own experimental, storage and other establishments, and is responsible for the administration of such matters as labour supply, labour management, welfare, housing and transport in connection with these organisations.

The Board of Trade

The Board of Trade was formally constituted as a Committee of the Privy Council by an Order in Council of 1786, which still provides its constitutional basis. Since 1867, the President of the Board of Trade has been the only effective member of this committee and his authority is, in practice, similar to that of a Secretary of State or other minister of Cabinet rank.

The Board of Trade has a general responsibility in respect of the United Kingdom's commerce, industry and overseas trade, including commercial relations with other countries, import and export trade, the protective tariff, industrial development and consumer protection. It is also responsible for (1) the promotion of exports, (2) statistics of trade and industry (both at home and abroad), including the censuses of production and distribution, and (3) the administration of certain regulative legislation, for example, in relation to patents, registered designs, copyright, trade marks, weights and measures, merchandise marks, companies, bankruptcy, insurance, distribution of industry, films, and enemy property.

In addition, the Board of Trade is the department generally responsible for Government relations with all industries which are not specifically the concern of other departments. In this connection, it provides both a channel of communication with and a point of contact for these industries, and a central place at which knowledge about these industries and their problems is accumulated, analysed, and used as a basis for advising ministers and other departments. The main industries which fall outside the scope of the Board of Trade's specific concern are food, agriculture and fisheries, building and quarrying, iron and steel, shipbuilding, fuel and power, and transport.

The Ministry of Transport and Civil Aviation

The Ministry of Transport and the Ministry of Civil Aviation were amalgamated in 1953 as the Ministry of Transport and Civil Aviation.

The powers and duties of the ministry relate to inland transport, shipping and civil aviation.

On the inland transport side, the ministry is concerned with railways, inland waterways, roads, bridges and ferries, and the vehicles they carry. The Minister of Transport and Civil Aviation is the highway authority for trunk roads in England and Wales; he appoints the members of the British Transport Commission and agrees the general lines on which its development programme is drawn up.

The marine side of the ministry's work is concerned with national and international shipping policy; ships, their masters, officers and men; safety of life at sea; navigation (including pilotage, lighthouses and other aids to safety in navigation); wreck and salvage; harbours, docks, piers and river conservancy; and the Coastguard Service. The ministry is also responsible for providing and operating troopships.

In civil aviation matters, the minister appoints the members of the airline corporations and maintains close touch with them in all matters affecting the national interest. He also approves associate arrangements between airline corporations and independent air transport companies for the operation of scheduled services. The

general civil aviation responsibilities of the ministry include: the regulation of civil flying; air safety and efficiency; the provision, administration and equipment of State-controlled aerodromes and other ground services; the negotiation of international air transport agreements; the registration of aircraft; the licensing of aircrew and aircraft maintenance personnel; and research on air navigation.

The War Office

The office of Secretary of State for War was established in 1854. In 1904, the Army Council was constituted on the model of the Board of Admiralty, with the Secretary of State for War as president and a membership of both military and civil personnel.

The War Office is responsible for the administrative control of the Army, including appointments, promotions, postings and payment. Its functions include the planning of operations and training; the collection and sifting of military information; the framing of policy on the composition, weapons and equipment of the Army; the determination of financial and labour policy connected with the Army; and the supervision of War Office civilian staffs both at home and abroad.

The Ministry of Works

The Ministry of Works, previously known as His Majesty's Office of Works, was established under its present title in 1943. Its main functions are: the provision of office accommodation for Government departments (including public buildings overseas), and of many other types of accommodation required by civil and Service departments; the design, purchase, supply and maintenance of furniture and equipment for Government departments and certain other bodies, and their supplies of fuel, household articles and stores; the administration of the Ancient Monuments Acts and the maintenance of those ancient monuments and historic buildings which are in its charge; the making of grants, on the advice of the Historic Buildings Councils, towards the maintenance of historic buildings of outstanding interest; the maintenance of royal palaces and certain official residences; the provision of building, engineering and supplies services for certain State ceremonial occasions; the management and maintenance of the royal parks and certain other open spaces.

The ministry also has responsibilities for the general efficiency of the building, civil engineering and building materials industries and for co-ordinating information about current and future building programmes. For this, regular consultation with the industries at national and regional levels and a comprehensive statistical service are maintained. Encouragement is also given to the industries to make full use of the results of research and development.

SCOTLAND

The first Secretary for Scotland was appointed in 1885 in recognition of the fact that Scotland required a system of administration separate from that of England and Wales. Forty years later, his powers and duties were transferred to a Secretary of State, appointed by the Secretaries of State Act, 1926.

The Secretary of State is assisted at ministerial level by a Minister of State and three Parliamentary Under-Secretaries of State. There are also two Scottish Law Officers. The Secretary of State's functions are discharged by four main administrative departments of equal status, each under a Secretary responsible to the Secretary of State for the discharge of the duties of the department. The day-to-day administration of the departments is conducted in Edinburgh, but each depart-

ment has representatives in London for liaison and parliamentary duties. The London office is generally known as the Scottish Office, a term also used to describe all Scottish administration for which the Secretary of State is responsible.

The four main Scottish departments are the Scottish Home Department, the Department of Health for Scotland, the Scottish Education Department, and the Department of Agriculture for Scotland. The Scottish ministers are advised and assisted (particularly in relation to questions with which more than one of the departments is concerned or which fall outside the province of any of them) by the Permanent Under-Secretary of State, Scottish Office, who is free from departmental duties.

The Scottish Home Department

The Scottish Home Department was set up in 1939 to take over the work that had been undertaken previously by the Secretary of State's Office, and by the Fishery Board for Scotland and the Prisons Department for Scotland.

In the field of law and order, the department is concerned with the police, probation and remand home services, criminal justice, legal aid and the services needed by the courts; and it is directly responsible for the administration of prisons and borstal institutions.

The department is the central authority in Scotland for the fire service and civil defence; for the children's service; for highways administration, including road safety matters (except in so far as they relate to the construction and use of vehicles); and for legislation concerning shops, theatres, cinemas and licensed premises. Licensed premises in districts in which State management of the liquor trade is in operation are directly maintained by the Home Department.

The department has general duties in connection with the structure and finance of local authorities, including valuation and rating and the administration of the Exchequer equalisation grants; and it is responsible for the oversight and protection of the Scottish inshore, deep-sea and freshwater fisheries. It is also closely concerned, in co-operation with the Board of Trade and other United Kingdom departments, with Scottish economic development, including the provision of electric power and the rehabilitation of the Highlands generally.

The Department of Health for Scotland

The Department of Health for Scotland is responsible for the general supervision of the National Health Service in Scotland; for the central administration of the Housing (Scotland) Acts; for the supervision of the house-building programme and for the distribution of grants to local authorities for housing purposes; for the control, under the Town and Country Planning (Scotland) Acts, of the use of land; and for the establishment of new towns under the New Towns Act.

The department is also responsible for supervising the administration of various environmental services, including services connected with water supplies, sewerage, clean air, and clean rivers; for welfare services, e.g., the care of the aged and handicapped persons; and for the medical and surgical treatment of war pensioners in Scotland (including hospital services, and the supply and repair of artificial limbs, surgical appliances and invalid chairs).

The Scottish Education Department

The Scottish Education Department is responsible for supervising the administration of the Education (Scotland) Acts, for guiding the development of public education in Scotland in all its forms, for supervising the training of teachers, for issuing teachers' certificates and administering the Teachers' (Superannuation)

(Scotland) Regulations, for controlling the distribution of specific Exchequer grants in aid of educational expenditure, for conducting the annual examination for the Scottish Leaving Certificate, and for exercising general supervision over approved schools, and over the administration of the Royal Scottish Museum.

The Department of Agriculture for Scotland

The Department of Agriculture for Scotland is the successor of the Board of Agriculture, which was established in 1912. Its broad function is to assist, encourage and improve home food production. It has a general responsibility for all Government measures for the promotion and development of farming in Scotland, and in most cases the department itself administers them. The measures include: guaranteed prices for the major farm products, fixed in association with the other agricultural departments in the United Kingdom; the provision of grants and subsidies and other services in connection with food production; the application of measures for controlling injurious animals and birds and infestations in stored food; the management of the extensive agricultural property owned by the Secretary of State; the use and improvement of land and the improvement of farm stock and crops; the economics of the industry; the instructional, advisory and research services provided by the three agricultural colleges and eight research institutes in Scotland; measures to promote animal health; the regulation of agricultural wages; and the application to the agricultural industry of safety, health and welfare measures.

Other Departments

In addition to the main departments, there are a number of other Scottish departments, all of which work in varying degrees under the direction of the Secretary of State. Such departments include the Department of the Registrar-General for Scotland (the General Registry Office); the Scottish Record Office; the Department of the Registers of Scotland; and the Scottish Information Office, which undertakes information services on behalf of the Secretary of State for Scotland, the Scottish departments and, in some degree, for Great Britain departments in Scotland, and acts as the agent in Scotland of the Central Office of Information. There are also Scottish branches of the Great Britain and United Kingdom departments under the direction of controllers, who are responsible for ensuring that the execution in Scotland of the policy and procedure of their departments is in accordance with Scottish conditions and needs.

Legal Departments

The Law Officers for Scotland are the Lord Advocate and the Solicitor-General. The Lord Advocate is in administrative control of two departments: *The Lord Advocate's Department*, which is responsible for drafting Scottish legislation, providing legal advice on Scottish questions for other departments, and assisting the Scottish Law Officers in certain of their legal duties; and *The Crown Office*, which is the central department responsible, under the Lord Advocate, for the institution of criminal proceedings. The Lord Advocate is also responsible for the work of the public prosecutors—the Procurators Fiscal—who are appointed by him in each sheriff court district.

NORTHERN IRELAND

Executive and administrative powers in connection with matters over which the Northern Ireland Parliament has jurisdiction are vested in the Crown, and exercised by the Governor through a number of departments. Each of the seven ministries

(Finance, Home Affairs, Labour and National Insurance, Education, Agriculture, Commerce, and Health and Local Government) is under the control of a minister appointed by the Governor. In addition, there are a National Assistance Board and an Exchequer and Audit Department which, together with the Ministries of Home Affairs, Education, and Agriculture have functions indicated by their titles. The other departments have duties of a varied nature, which are summarised below.

The Ministry of Finance

In addition to acting as Treasury to the Government of Northern Ireland, the Ministry of Finance is responsible for administrative work in connection with the erection and maintenance of public works and buildings and for the preservation of ancient monuments; for Government valuation and survey; for land registry, the registry of deeds, and certain duties in connection with land purchase; for the work of the Registrar-General and of the Public Record Office; for the control of Government publications; for the control and administration of charitable donations and bequests; for the control of borrowings; for the collection of death duty, entertainments duty (cinemas) and other transferred excise duties; and for the administration of the Ulster savings movement and the Ulster Land Fund.

Attached to the department is the Office of the Parliamentary Draftsmen (similar to the Office of the Parliamentary Counsel), in which Government Bills are prepared for introduction into Parliament.

The Ministry of Commerce

The Ministry of Commerce undertakes commercial intelligence work, and is concerned with industrial production and the development of, and financial help for, new and existing industries. The department also has responsibilities in relation to electricity and gas undertakings; roads and bridges and inland public transport; the Northern Ireland Road Fund; railways; harbours and inland waterways; fisheries; the tourist trade; the regulation and inspection of mines and quarries; mineral development; scientific development; weights and measures; the registration of companies and trade unions; and the administration of the Assurance Companies Acts and the Industrial Assurance Acts (Northern Ireland), 1924-48.

The Ministry of Health and Local Government

The ministry is responsible for the general supervision of the Health Services in Northern Ireland, which are broadly similar to the National Health Service in Great Britain. It also exercises functions under the Housing Acts (Northern Ireland), supervising the house-building programmes of, and distributing grants to, local housing authorities and the Northern Ireland Housing Trust. The department also supervises various other functions of local authorities, including planning, public health, water, sewerage and welfare services (many of which attract specific grants-in-aid) and it controls the issue of central financial aid to local authorities.

The Ministry of Labour and National Insurance

The ministry is responsible for the administration of the Factories Acts and other legislation connected with industrial health and welfare; for the promotion in industry of joint machinery for negotiation and for assistance in the prevention and settlement of industrial disputes; for the administration of the Wages Councils Act; for the administration of local employment offices and training centres and the machinery for dealing with employment questions of all kinds under the Employment and Training Act and Disabled Persons (Employment) Act; for the

administration of the National Insurance Acts and the National Insurance (Industrial Injuries) Acts, and of the Family Allowances Acts; and for carrying out certain statutory functions in connection with the National Assistance scheme in conjunction with the National Assistance Board for Northern Ireland.

THE CIVIL SERVICE

A civil servant in Britain is a servant of the Crown (not being the holder of a political or judicial office), who is employed in a civil capacity and whose remuneration is found wholly and directly out of money voted by Parliament. The number of civil servants under this definition amounts to nearly a million, for it includes some 366,400¹ Government industrial employees in such establishments as Royal Ordnance factories and Admiralty dockyards. The term 'Civil Service' is, however, generally used only to cover 'non-industrial' members of the staffs of the various Government departments in the United Kingdom or working overseas either in the Foreign Service or for other Government departments such as the Commonwealth Relations Office. At 1st April, 1959, the total number of non-industrial civil servants employed in all departments, at home and overseas, was 632,925¹; nearly one-third of this total are women.

Although the civil servant is legally a servant of the Crown, in practice he serves the minister in charge of the department in which he works, by advising on the formulation of policy and by carrying out policy decisions once they have been taken. From time to time the minister may change, but the civil servant remains to serve his successor. In Britain, changes of government do not involve changes in departmental personnel; this continuity makes for administrative stability.

Development of the Modern Civil Service

The Civil Service in its present form is a product of the past hundred years. Before then, departments were free to choose their own staffs, qualifying standards were unknown, there was no central supervision, and political jobbery was rife. Measures of reform instigated during the nineteenth century included the substitution of open competition for the practice of obtaining civil service appointments by favour or purchase, and the establishment of an independent body, the Civil Service Commission, to organise recruitment to the service. The great expansion in State planning which has taken place during the last fifty years, and the consequent expansion in the numbers of civil servants and the scope of their duties, have led to further reorganisation. During the last few decades, recruitment competitions have been adapted to a developing educational system; co-ordination between the various departments has been improved; and the search for increased efficiency in the conduct of public business has been the task of many Government-appointed commissions and committees of inquiry. As a result, civil servants, though they remain employees of their departments, are today members of an integrated service with common conditions of employment and common traditions and standards of conduct which belong not to individual departments but to the Civil Service as a whole.

Departmental Organisation

The responsibility for the policy and activities of each department lies with the minister, who is answerable to Parliament for what the civil servants in the department say and do.

¹ Part-time staffs are included in these, and subsequent, figures—two part-time officers being reckoned as equivalent to one whole-time officer.

The internal organisation of departments is a matter for each department to decide, and it varies according to the volume and nature of the work involved. There are, however, features common to most departments: for example, the minister of a major department is likely to have at the head of his officials a Permanent Secretary (known as the Permanent Under-Secretary of State in those departments where the minister is a Secretary of State) who is also Accounting Officer and must appear periodically before the Public Accounts Committee; one or more Deputy Secretaries; and a varying number of Under-Secretaries and Assistant Secretaries. In addition, major departments usually have a Principal Finance Officer and a Principal Establishments and Organisation Officer. A number of Establishment Divisions have their own Organisation and Methods (or 'O & M') branch, the members of which act in an advisory capacity as 'efficiency experts'. Many departments also have their own legal advisers or solicitors, and their own Information Division. The use (wholly or in part) of the standard classes and grades of civil servants, which are described below, is common to most departments.

Control of the Service

The measure of uniformity in the Civil Service has largely resulted from the fact that the Treasury exercises general control. One of the two Joint Permanent Secretaries to the Treasury is the official head of the Home Civil Service and the principal adviser of the Prime Minister on matters affecting the Civil Service as a whole, and in particular on appointments to senior posts in the service. The Treasury is also responsible for the salaries and conditions of employment of civil servants; it controls total numbers of staff and the creation of higher posts, maintains a central Organisation and Methods Division which serves all departments which do not maintain an Organisation and Methods branch of their own, and deals with general questions relating to training after entry into the Civil Service. It is also concerned with the number of departments and the distribution of functions.

Classes and Grades

The engagement and position of all civil servants are covered by regulation, agreement and traditional practice—every civil servant being assured of a definite status depending upon the post which he is called upon to fill. There are four main classes of civil servants, each class containing a series of grades. The classes are:

1. The *Administrative Class*, which is responsible for advising ministers on policy, for dealing with any difficulties which may arise in carrying out existing policy, and for forecasting the probable effects of new measures and regulations. This relatively small class, which in April 1959 numbered 2,491, is recruited largely from university graduates.
2. The *Executive Class* (numbering some 68,000 in April 1959), which is responsible for the day-to-day conduct of Government business, including the higher work of supply and accounts, within the framework of established policy. Members of this class may, after entry, train for specialist work such as that of auditor, actuary or statistician.
3. The *Clerical Class* (the largest of the main classes, comprising about 182,500 officers including clerical assistants), which undertakes all the usual clerical work involved in running departmental business, e.g., the preparation of accounts and the keeping of records, the handling of particular claims in accordance with known rules, and the summarising and annotation of documents for the assistance of senior officers.

4. The *Typing Class* (about 26,500 members), which consists of shorthand typists, copy typists and learner typists.

Among other classes are: the *Professional, Scientific and Technical Classes*, which consist of some 70,800 civil servants with the necessary qualifications (e.g., doctors, lawyers, engineers and research workers) for carrying out the wide range of specialised duties which are now discharged by the Government; the *Inspectorate*, which numbers about 2,600; the *Ancillary Technical Class*, which includes machine and duplicator operators, prison officers, forest workers and others, and numbers some 42,100; the *Messengerial Class* which, in addition to messengers, includes paper keepers, office cleaners and similar workers (in all some 35,000); and the *Minor and Manipulative Class* (with some 202,000 members) which consists entirely of post office workers, e.g., postmen, postal and telegraph officers, telephonists and telegraphists, and their immediate supervisors.

The Foreign Service

Her Majesty's Foreign Service is a separate self-contained service of the Crown, formed in 1943 as a result of the amalgamation of the Foreign Office and the Diplomatic Service with the Consular and Commercial-Diplomatic Services. It provides an interchangeable staff for service both at home and at United Kingdom diplomatic missions and consular posts in foreign countries¹ and, in 1959, it numbered some 2,520 established members.

The classes of the Foreign Service have their own nomenclature: Branch A corresponds roughly to the administrative class of the Home Civil Service; Branch B to the executive and clerical classes; and Branch C to the typing class. Branch D carries out security and guard duties at Foreign Service posts abroad, and Branch T technical duties in the Foreign Office and at Foreign Service posts abroad. There are no equivalents of Branches D and T in the Home Civil Service. Members of Branches A, B and C may be employed on any type of Foreign Service work—diplomatic, consular, commercial and 'information'. In addition, various specialists and advisers who are seconded from the fighting Services and from home Government departments (e.g., those concerned with financial, commercial or labour matters) are often attached to overseas posts. At many posts abroad, some of the staff are locally engaged on a 'temporary' basis, i.e. they do not normally qualify for pensions.

Recruitment of Staff

The recruitment of all permanent civil servants is in the hands of the Civil Service Commission which, in the selection of entrants, is independent of both ministerial and parliamentary control; its members are appointed by the Crown on the advice of the Government. The normal method of entry is by open competition, conducted in accordance with regulations approved by the Treasury and consisting of written examinations or interviews, or both. The main points of entry into the four main classes of the Home Civil Service are planned to correspond to definite levels in the British educational system, and it is the commission's duty to study the requirements of the Civil Service in the light of the education provided by the schools and universities.

In addition to holding examinations and conducting interviews, the commission is responsible for issuing a certificate of qualification in respect of each successful candidate, for placing new entrants in departments for which their qualifications

¹ United Kingdom diplomatic posts in other independent Commonwealth countries are normally staffed from the Commonwealth Relations Office and (in respect of the Trade Commissioners' Offices associated with them) from the Board of Trade.

are appropriate, and for watching the careers of those it has selected in order to ensure that current methods of recruitment are successful and up to date.

Temporary civil servants, who do not qualify for pensions, but are eligible for gratuities, are normally recruited by the department concerned, either directly or with the help of the Ministry of Labour and National Service. No qualifying examinations are required for entrance on a temporary basis to general service.

Training after Entry

Each of the larger Government departments has a training officer and a number of instructors, who organise both general and technical courses where necessary. Types of courses vary from department to department, but nearly all have systematic instruction of recruits in all classes. There are also 'refresher' courses for more experienced staff covering technical subjects or broader subjects such as management and supervision.

Methods of training include discussion groups, case studies, instructional films and educational visits to enable civil servants to study the working of appropriate outside bodies. In addition, officers in the early years of their service may be transferred from branch to branch and, more rarely, from department to department, in order that they may gain as wide an experience as possible of civil service activities. Special leave schemes enable a few senior officers, each year, to travel abroad or to undertake research at United Kingdom universities.

Training is co-ordinated by the Training and Education Division of the Treasury, which runs central courses for members of the administrative, professional and scientific classes at different stages of their careers. In addition, the division trains departmental instructors and other special groups, such as superintendents of typists, and secretaries.

Promotion

A period of probation (lasting from one to two years according to grade, with extensions in certain instances) is the rule for all new entrants to the permanent Civil Service. Promotions from grade to grade are made by departments; those from class to class partly through centrally conducted competitions (open only to serving members of specified civil service classes), and partly by departments themselves. All promotions to the administrative class from other classes require Treasury approval. Promotions to most of the highest positions in the Civil Service, i.e. permanent secretary, deputy secretary, principal establishments officer and principal finance officer, must be approved by the Prime Minister; he is advised in these matters by the Joint Permanent Secretary to the Treasury who is the official head of the Home Civil Service.

Conditions of Service

Machinery for negotiation on conditions of service affecting the Civil Service as a whole is provided by the National Whitley Council,¹ which is composed jointly of official and staff representatives. Negotiating machinery for separate sections of the service is provided through the various staff associations which civil servants are encouraged to join (e.g., the Civil Service Clerical Association, the Union of Post Office Workers, the Society of Civil Servants, the Institution of Professional Civil Servants, and the Association of First Division Civil Servants), and through departmental Whitley Councils¹ (of which there are about 65).

¹ Whitley Councils are representative bodies for negotiation and joint consultation between managements and staffs; the councils are named after Mr. J. H. Whitley, former Speaker of the House of Commons and chairman of a committee which investigated industrial unrest from 1916 to 1919.

In general, the civil servant receives a salary which is intended to compare fairly with that paid for similar work outside the service, and he normally receives annual increments up to the maximum of the scale of the grade to which he belongs. In addition, although a civil servant holds office at the pleasure of the Crown and may therefore be dismissed at any time, in practice he enjoys a considerable measure of security of tenure. Thus every permanent civil servant may reasonably expect a full career in the public service, and a pension on retirement—though this, again, is not a legal right.

Civil servants are generally 'conditioned' to a given number of hours of attendance a week. Overtime is paid to members of most of the lower salary groups if they work longer than their 'conditioned' hours. The standard working week for office staffs is 42 hours in London and 44 hours in the provinces. Annual leave varies according to the grade up to a maximum of six weeks, i.e. 30 working days, a year. Sick leave on full pay, less any National Insurance benefit received, may be granted to established civil servants for up to six months in any twelve months, and on reduced pay up to a maximum of one year's sick leave in any four years.

Political and Private Activities

Officially, the position and functions of a civil servant remain the same whichever political party is in power; and it is his duty to serve the government of the day irrespective of his own political opinion. The extent to which a civil servant, as a private individual, is free to participate in political activities varies according to grade. For this purpose civil servants are divided into three groups: (1) the unrestricted, which includes all industrial staff, post office counter clerks, postmen, cleaners, messengers, and similar workers, who are free to engage in all kinds of national and local political activities, although, if intending to stand for Parliament, they should resign before nomination day, since a serving civil servant cannot sit in the House of Commons; (2) the intermediate, which includes typists, clerical assistants, clerical officers, and analogous grades, who are free to engage in all political activities, except parliamentary candidature, subject to certain conditions and with the permission of their departments; and (3) the restricted, which includes all civil servants not in the other two groups. This last group is barred from taking part in national political activities, but may seek permission to engage in local political activities, subject to certain conditions.

Civil servants of every grade may, of course, exercise the right of all citizens to register their private political opinions on appropriate occasions, e.g., at a general election or at local authority elections.

The Government is not concerned with the private political views of its servants, except where there are duties in which secrecy is so vitally important to State security that it does not feel itself justified in employing any one to carry them out whose reliability is in doubt; therefore no one who is known to be a member of, or actively associated with, the Communist Party or with Fascist organisations is employed in connection with such work. Otherwise, every civil servant may engage in such private activities as he wishes, provided that these do not in any way conflict with his official duties, nor with the provisions of the Official Secrets Acts of 1911 and 1920 and the Prevention of Corruption Act of 1906. A civil servant must not, however, use his official position to further his private interests; and he is therefore subject to restrictions in matters of commerce and business from which the ordinary citizen is free, e.g., he may not hold private interests in public contracts; and he may not use official information in writing, broadcasting or lecturing without the express approval of his department. Above all, a civil servant

is expected to conform to the high standards of integrity which characterise the service to which he belongs.

LOCAL GOVERNMENT

Local government has been defined as government by popularly elected bodies charged with administrative and executive duties in matters concerning the inhabitants of a particular district or place and vested with powers to make by-laws¹ for their guidance.

Government on a local basis has been part of the administrative system of the United Kingdom for many centuries. In its present shape, however, it dates back only to the late nineteenth century, when the conception of a comprehensive system of locally elected councils to manage various services provided for the benefit of the community was first incorporated in statute law.

Since local authorities were established their responsibilities have progressively increased. They were charged with the management of most of the social services that were created or expanded during the first forty years of the present century; after the second world war, although certain of their functions (e.g., those connected with hospitals and gas and electricity supplies) were transferred to other authorities, they were given additional duties and powers in connection with, among other things, the general health and welfare services, the care of deprived children, town and country planning, civil defence, and clean air.

The Local Government Act, 1958, and the Local Government and Miscellaneous Financial Provisions (Scotland) Act, 1958—have made changes in the local government financial system of Great Britain to give greater independence to local authorities in the spending of money in their own areas; the English Act has also provided for some devolution of responsibility for county services to the councils of some of the larger county districts, and established machinery for the review and alteration of local government areas and authorities in England (outside Greater London) and Wales.

Relationship between Central and Local Government

As the supreme authority in the United Kingdom, Parliament controls local authorities through Acts of Parliament, which require or permit elected local councils to implement policies prescribed and defined in those Acts. The scope of local government is limited by the same means; no council may go beyond the bounds fixed for its activities by an Act of Parliament.

Legislation is supported by departmental supervision: Parliament makes certain ministers responsible for securing the efficient functioning of local government services. Departmental supervision is exercised by means of inspections, inquiries, examinations of statistics, authorisation of loans, the issue of advisory circulars and statutory instruments, the approval of by-laws, and the administration of Exchequer grants. The Ministry of Housing and Local Government is the main link between local authorities and the central Government in England and Wales; in Scotland the Scottish Home Department is generally responsible for local government; and in Northern Ireland the Ministry of Health and Local Government.

Principal Types of Local Authority

For purposes of local government, England and Wales and Northern Ireland are divided into county boroughs and administrative counties. Administrative counties

¹ Laws of local application which must be approved by the appropriate minister.

(outside London) are further divided into three types of county district: non-county boroughs; urban districts; and rural districts, which are themselves sub-divided into parishes (except in Northern Ireland). Each of these divisions is administered by a different kind of local authority, as follows:

*England and Wales*¹

county councils (61)	rural district councils (474) ²
county borough councils (83)	parish councils (some 7,500) or
non-county borough councils (318)	parish meetings (some 3,300).
urban district councils (564)	

Northern Ireland

county councils (6)	urban district councils (25)
county borough councils (2)	town commissioners (1)
borough councils (9)	rural district councils (31).

Scotland

The local authorities in Scotland are:

- county councils (33, of which two pairs are combined for certain purposes)
- town councils (198, consisting of: the authorities for counties of cities, 4; other large burghs, 20; and small burghs, 174)
- district councils (199; two counties are not divided into districts).

There are, in addition, the local authorities for *London*, which are unlike those in the rest of the United Kingdom. They are:

- the London County Council
- the Corporation of the City of London
- metropolitan borough councils (28).

Constitution of Councils

Local councils comprise a number of elected councillors (and, in some cases, aldermen elected by the councillors), presided over by a chairman who has varied ceremonial and civic duties to perform in addition to his work on the council. In most boroughs of England and Wales and Northern Ireland the chairman is the Mayor; in the City of London and certain important boroughs, the Lord Mayor; in the Scottish counties, the Convenor; and in the burghs, the Provost or Lord Provost.

Local Government Commissions

Local authority areas, even when administered by the same type of local council, show great variations in density of population and territorial size. This diversity has tended to increase during recent decades, and, as a result, two Local Government Commissions have been established to review the general county and county borough pattern in England (outside the Greater London area) and in Wales respectively, and, in special review areas (Tyneside, west Yorkshire, south-east Lancashire, Merseyside and the west Midlands) the district pattern and the distribution of functions as well. The commissioners are required to make recommendations

¹ Excluding the county of London.

² Including the Isles of Scilly.

for such changes in the pattern as may appear to them desirable after investigating the circumstances of local government in each area under review, and after consulting the relevant local authorities and other interested bodies and persons. The final proposals of the commissioners may be given effect by ministerial order, with or without modification. Their recommendations (and any ministerial order) are to be submitted to Parliament.

The system and the working of local government in the Greater London area are being examined by a Royal Commission set up by Royal Warrant in 1957 to recommend whether any, and if so what, changes in the local government structure and the distribution of local government functions in the area, or any part of it, would secure more effective and convenient local government.

Functions and Services

It is the primary duty of every local authority to provide and administer such environmental and social services as it may be required to provide and administer by an Act of Parliament. It may provide additional services under the permissive powers of a general Act or under powers granted to it by Adoptive Acts or by local or Private Bill legislation.

The responsibilities of local authorities depend upon their type, as follows: in England (outside the County of London) and Wales and Northern Ireland, county borough councils are all-purpose authorities, while both county councils and county district councils have particular functions allotted to them, which they exercise independently to a considerable extent, although there is a certain degree of delegation from county councils to county district councils especially in the field of planning and in the education, health and welfare services. Parish councils or parish meetings have a few functions which they may exercise of right.

The broad principle underlying the distribution of powers and duties between the London County Council (LCC) and the metropolitan borough councils is that all those powers and duties which require uniformity of action throughout the whole of London are administered by the LCC, while those that can be locally managed are vested in the borough councils. The City Corporation exercises, in the City of London, the general powers administered and duties performed by the metropolitan borough councils, and also a number of functions which, in the rest of London, devolve on the LCC. The City Corporation is not, however, an all-purpose authority, since certain services in the City, e.g., education, are administered by the LCC.

In Scotland, the town councils of the counties of cities are all-purpose authorities; elsewhere the county councils exercise very many local government functions. In large burghs, they administer education, valuation for rating, and, in some cases, the police service, all other functions being exercised by the town councils. In small burghs, county councils undertake a number of important functions, but housing and some other services are administered by the town councils. The functions of the district councils—the smallest authorities—are similar to those of parish councils or parish meetings in England and Wales.

The services provided by the councils are generally classified under three heads—environmental, protective and personal.

Environmental Services are designed to secure and improve the citizens' surroundings. The majority are public health and sanitary services administered in England and Wales either by the county, county district, or parish councils (in London by the metropolitan borough councils), in Northern Ireland by the county, county borough, borough and district councils, and in Scotland by the county and town councils, e.g., the inspection and abatement of nuisances,

drainage, sewerage, street cleansing, refuse collection and disposal, the supervision of water supplies, measures for ensuring food hygiene and for preventing air pollution, for litter control, and rodent control, and the provision of baths and washhouses. There are also the services for bridge and highway construction and maintenance, for street lighting, public safety on the highways, and the provision of amenities such as parks and recreation grounds, which are generally administered by the same authorities and also, in part, by district councils in Scotland. Town and country planning is carried out in England and Wales by the county councils, which may delegate certain of their powers to county district councils, and in Scotland by county councils and the town councils of large burghs. County borough councils, as all-purpose authorities, normally provide and administer all their own environmental services.

Protective Services include the fire service, the civil defence service and the police. The fire service is administered throughout England and Wales by the county borough councils and the county councils, or by joint authorities (or joint committees) set up by those councils if they amalgamate. In Scotland, the fire service is administered by eleven fire authorities: the town council of Glasgow and ten joint committees of the councils of counties and large burghs. Responsibility for organising the local divisions of the Civil Defence Corps is vested, in England and Wales, in the county and county borough councils, together with a few county district councils; in London, in the metropolitan borough councils and the City Corporation; and in Scotland in the cities and county councils. The police service is administered by standing joint committees in the counties of England and Wales, by watch committees in the county boroughs, or by committees consisting of representatives of the constituent authorities in the case of combined police districts. In London, the City Corporation has jurisdiction over the police force in its area, while the Home Secretary, through the Commissioner of Police for the Metropolis, has responsibility for the metropolitan police force. The police authorities in Scotland are the county councils, the town councils of certain large burghs, or joint boards for combined forces.

Personal Services are intended to promote the well-being of individuals. The type of authority concerned depends on the nature of the services, which range from health services, education, and housing to the provision of entertainments. The services concerned primarily with health and welfare include the provision of ante-natal, post-natal and child welfare clinics, and some residential and day nurseries; the supervision of the midwifery service; the provision of health visitors and home nursing services; measures for the prevention of illness and the after-care of physically or mentally sick persons; the provision of domestic help where necessary; the ambulance service; the provision of facilities for vaccination and immunisation against certain infectious diseases; and the services for the permanently disabled or handicapped, for the aged and infirm and for children deprived of a normal home life. Education and culture are promoted by the establishment and maintenance of various types of schools; by the provision of adult education centres, and art and technical colleges; by the award of grants and scholarships to students of all kinds; and by the provision of libraries, art galleries and museums. New houses are provided by local authorities on land acquired by them; accommodation is also provided by the acquisition or conversion of suitable houses. Most houses owned by local authorities are for letting, but they may, in certain cases, be offered for sale. Councils may also make loans to persons

wishing to buy privately owned houses. Local authorities are responsible for ensuring that houses unfit for human habitation are demolished or closed.

Some local authorities also engage in *trading services*, e.g., passenger transport, water supply, and harbour, dock and pier services; but these are less numerous than in the past.

Local Authority Elections

The normal term of office of a councillor elected to any form of local government is three years; aldermen hold office for six years. In some local authority areas the whole council retires every third year and another is elected immediately; in other areas elections are held annually, when one-third of the councillors retire. Procedure at local government elections is governed by rules laid down in the Representation of the People Act, 1949.

Any person (including a member of the House of Lords) is entitled to vote at a local government election provided that he or she is 21 years of age or over and a British subject, or a citizen of the Irish Republic, and is registered as a local government elector for the area for which the election is held. In Great Britain, a person qualifies for registration as a local government elector if, on the qualifying date for the register (which is compiled annually), he or she is resident in the area or occupies as owner or tenant any rateable land or premises in the area of a yearly value of not less than £10. In Northern Ireland, in order to qualify for registration as a local government elector, a person must have been born in Northern Ireland, or alternatively, have resided continuously in the United Kingdom for seven years immediately prior to the qualifying date and must have either a resident occupier's qualification, or a general occupier's qualification.

Voting takes place at polling stations arranged by the council concerned, under the supervision of a presiding officer appointed for the purpose. The procedure for local government voting in Great Britain is similar to that for parliamentary elections, although facilities for postal voting are more restricted.

Every candidate for election as a councillor stands either as a representative of one of the national political parties, or as a member of an association representing some local interest, or as an independent. Each must be nominated by two electors, as proposer and seconder; and in England and Wales (except in elections for metropolitan borough councils, rural district councils and parish councils) eight other electors for the area must assent to the nomination. In Scotland, county and district council candidates require proposers but no assenters, town council candidates proposers and five assenters. Candidates must be of British nationality over 21 years of age and must either (1) be registered as local government electors in the register of electors for the area for which they seek election, or (2) have resided within that area during the whole of the twelve months preceding the election (or within 3 miles in the case of parish councils), or (3) in England and Wales, own freehold or leasehold land in the area. Candidates are also subject to a number of statutory disqualifications designed to ensure that unsuitable persons do not offer themselves for election.

Procedure at local government elections in Northern Ireland is governed by electoral regulations made by the Ministry of Home Affairs for Northern Ireland. These regulations are similar to those which apply in Great Britain, though differing in certain particulars; for example, the town clerk or the clerk to the council is the returning officer for all elections to the authority; there is no postal voting and the only persons who may vote by proxy are Service voters.

Just as Great Britain as a whole is divided into constituencies for the purpose of parliamentary elections, so, for local council elections, most local authority areas

are divided into electoral districts. Administrative counties are split up, in accordance with orders made by the Minister of Housing and Local Government or the Secretary of State for Scotland, into 'electoral divisions'. Boroughs, urban districts and rural districts in England and Wales, and the larger burghs in Scotland, are divided into 'wards', unless they are small enough to be left as single units. In rural districts, the wards are based on parishes which, if large enough, may themselves be split into parish wards.

Outside London, county divisions each return one member. The LCC electoral divisions (which cover the same areas as the London parliamentary constituencies) return three members each; in all other types of local authority area, each ward returns three, or a multiple of three, members.

Internal Organisation of Local Authorities

Local authorities are free to a very considerable extent to make their own internal arrangements and to choose the means and methods by which they will discharge their responsibilities. Questions of policy and principle are usually decided by the whole council, which appoints committees to carry out the detailed administration of its various services. The more important of the committees of the larger authorities divide their work among sub-committees, which stand to the parent committee in a relation similar to that of the main committees to the whole council. The execution of the policy decided upon by the council and the committees rests with salaried officers and employees, whose number may vary from about half a dozen in a small rural district to several thousand in the large counties and in the larger county boroughs and burghs.

Apart from one or two minor provisions regarding the representation of specialists on committees and the length of time certain members may hold office, committees of councils are free from legal restrictions; even those known as 'statutory' committees are constituted according to individual requirements and not according to any set pattern laid down. For purposes of classification, however, they may be divided into two kinds: ordinary committees and joint committees. Ordinary committees may be further divided into statutory committees, the appointment of which is compulsory under an Act of Parliament; standing committees, which are appointed in accordance with the standing orders of the council on a permanent basis according to the extent of the council's business; and special committees, which a council may set up for a limited period to deal with a particular problem that once solved is unlikely to recur.

Joint committees or joint boards consist of representatives of more than one authority. They are usually established for services that can be more effectively administered over a wider area than that controlled by a single council, e.g., town and country planning, water supplies and the police service.

Committees of a local authority may be advisory or executive; their powers and duties are usually laid down in the appointing council's standing orders or, in the case of a county or large burgh in Scotland, in the council's administrative scheme. A council is free to delegate all its powers to committees except its powers in connection with raising loans, levying rates or issuing precepts, which are legally reserved to the council as a whole.

Officers and Employees

Over one million people (including teachers, transport staff and building workers) are employed in local government service in Great Britain. Certain posts, e.g., the clerk, the treasurer, and the medical officer of health, are compulsory in almost all councils, but, apart from these, councils are free to fill such other posts

as they deem necessary for carrying out their work. Choice of personnel is also left to a great extent to the individual council; in theory, the appointment of certain chief officers is subject to some central control but, in practice, the nominee of the council is nearly always accepted.

Officers are normally of three kinds: heads of departments or chief officers, whose duties are mainly of an administrative and managerial kind; subordinate officers employed in a professional, clerical or technical capacity; and manual workers who are employed to do the actual physical work for which the council is responsible. As a rule, senior staff appointments are made at the instance of the committee or committees particularly concerned; while most junior appointments are made by heads of departments, who are also responsible for engaging the manual labour required. Appointments and engagements are always made in conformity with a set establishment, and committees are informed of any appointments which they have not made themselves.

Rates of pay and conditions of service for local authority staff are within the jurisdiction of the employing council (except where the proposed salary of an officer requires the approval of a Government department, as in the case of the clerk of a county council in England and Wales). They are based on recommendations made by the Whitley Councils,¹ of which there are several, including the National Joint Council for Local Authorities' Administrative, Professional, Technical and Clerical Services, the National Joint Industrial Council for Local Authorities' Non-Trading Services (Manual Workers), the National Joint Council for County Council Roadmen, and, in Scotland, the Joint Negotiating Committee for Chief Officials of Local Authorities (Scotland) and the Joint Industrial Councils for Local Authority Services. In England and Wales, conditions of service and salary scales for senior local government officers are determined by special negotiating machinery.

All local government officers are expected to maintain a high standard of conduct: as public servants they 'must not only be honest in fact, but must be beyond the reach of the suspicion of dishonesty'.

Local Government Finance

Total local authority expenditure on current and capital account amounts annually to over £2,000 million. Income derives from Exchequer grants (paid in Northern Ireland by the Government of Northern Ireland), from local rates, from loans, from trading receipts, rents, fees and other miscellaneous sources.

Government grants, which finance more than half the net expenditure by local authorities, are paid to the county and county borough councils in England and Wales by the Minister of Housing and Local Government and to the county and town councils in Scotland by the Secretary of State for Scotland. The largest single grant is now the general grant (established by the Local Government Acts of 1958) which replaces the specific grants previously paid in respect of education, health and welfare services, town planning, fire services, child care, road safety, police traffic patrol, physical training and recreation, and a few other services. The total sum of the general grant is fixed in advance for a period of two or more years and allocated among the authorities according to a formula based mainly on objective factors, such as size and distribution of population, and numbers of school children. In fixing the total amount, the Government takes into consideration the current rate of expenditure on the services concerned, any probable fluctuation in the demand for those services, the need for developing services, and the extent

¹ See footnote p. 67.

to which, having regard to the general economic condition of the country, it is reasonable to develop them. If, during any grant period, an unforeseen rise in the general level of prices, costs or remuneration occurs and its effect on the cost of providing the services covered is of such magnitude that it is felt that it ought not to fall entirely on local authorities, the ministers are empowered to adjust the amount of the grant. They also have power to reduce the allocation of any authority (subject to parliamentary confirmation) if they are satisfied that that authority has failed to achieve or maintain reasonable standards in the provision of the relevant services in comparison with the standards achieved in other areas.

Other Government grants are: percentage grants, of which the two principal remaining examples are those for the police service and highways; unit grants, e.g., housing subsidies; rate deficiency grants (Exchequer equalisation grants in Scotland), which are contributions to the general revenues of the poorer local authorities to enable them to bring their services up to a higher level of efficiency; and assigned revenues, which are the proceeds of certain national taxes handed over to local authorities, e.g., game and gun licences and licences for hawkers, pawnbrokers, money-lenders and refreshment houses and, except in Scotland, dog licences.

Rates, which are a form of local taxation paid by the occupiers of land and buildings in a local authority area as contributions to the cost of local services, provide about one-third of the total income of local authorities. They are levied by a poundage on the rateable value of property, which in England and Wales is equivalent to the rent which the property might reasonably be expected to command if let from year to year, with the tenant bearing the rates and the cost of insurance and repairs. There are certain statutory reliefs from rate liability, notably for agricultural land and buildings, which are entirely exempt; for industrial and freight transport premises, which are rated at 50 per cent of the net annual value; and for such buildings as shops and offices, the rateable values of which are generally 80 per cent of their net annual value.

Valuation for rating is undertaken by the valuation officers of the Board of Inland Revenue; appeals may be made to local valuation courts, each consisting of three members of an independent local valuation panel, and thereafter to the Lands Tribunal. In Scotland, valuation has hitherto been based primarily on the annual rent actually payable; valuation on a basis similar to that in England and Wales will come into force in 1961. Valuation is carried out by assessors appointed by the councils of counties and counties of cities. Appeals lie to the valuation appeal committee of each valuation area and thereafter to the Lands Valuation Appeal Court of the Court of Session. A Scottish Valuation Advisory Council has been established by the Secretary of State for Scotland.

The responsibility for levying and collecting the rates in England and Wales lies with the councils of county boroughs and county districts; in London, with the City Corporation and the metropolitan borough councils. County councils finance themselves by issuing a precept on the county districts (in London the metropolitan borough councils and the City Corporation) for the sums of money required; while parishes are financed by rates levied by the appropriate rural district council on property within the parish as an addition to the general rates. Rates in Scotland are levied by the town councils in burghs and by county councils elsewhere; to cover their expenditure, district councils issue a requisition each year to the county council; a town council has to meet an annual requisition from the county council in respect of the burgh's share of the expenditure on functions exercised by the county council throughout the county, including the burgh. In Northern Ireland, county councils are responsible for making, levying and collecting the rates, except

in such parts of the county as fall within the jurisdiction of the county borough, borough, or urban district councils.

Loans may be raised by all types of local authority for financing capital expenditure, subject to the consent of the Minister of Housing and Local Government or the Secretary of State for Scotland, who are guided by the recommendations of the Government department responsible for the service for which the capital is required. Borrowing powers for specific purposes are sometimes included among the provisions of local Acts; the London County Council seeks parliamentary sanction every year to raise the money it needs for capital expenditure.

Loans may be raised by issuing stock upon the Stock Exchange, by internal borrowing, by private mortgage, or from the Public Works Loan Board, which is financed by the Exchequer.

Internal control of finance is exercised on behalf of the council concerned by a finance committee, whose function is to keep the financial policy of the council under constant review. In England and Wales, an external audit is carried out (except for certain general accounts in about two-thirds of the borough councils outside London) by district auditors appointed by the Ministry of Housing and Local Government. Borough councils must use the services of the district auditor for accounts which relate to education, national assistance, children, local health services, coast protection, motor tax, rate collection, fire, civil defence and town and country planning, but they may employ a professional firm of auditors to do other work. In Scotland, all accounts are audited by a professional auditor appointed by the Secretary of State for Scotland and paid by the council concerned.

THE LAW

The maintenance of public order in the United Kingdom is effected, generally speaking, by two agencies—the judiciary and the police. Both are concerned in different ways with the obedience of the citizen to the law.

Law is said to be based on the concepts of order and compulsion. In the legal sense, it has been defined as any rule which will be enforced by the courts; as it applies to a country, it is usually understood as the set of rules by which the citizens of that country will expect to regulate their conduct in relation to their fellow citizens and to the State.

There is no written code of law in the United Kingdom. The question whether a particular rule is recognised as law is determined, where possible, by consideration of the authorities: statutes, common law, and the opinions of legal writers of established reputation (although these are not law until accepted as such by the courts). If none of these authorities exists, the judge uses a process of analogy: that is to say, he bases his decision in a case on its similarity to a previous case in which judgment has already been given.

Common law originated in the customs of the realm, and has been built up by the decisions of the courts. A supplementary system of law, known as 'equity', came into being during the Middle Ages to temper justice with mercy where conscience was opposed to the rigours of the law, and to provide and enforce more effective protection for existing legal rights; later, it hardened into a separate body of legal rules. In 1873, the courts of equity were fused with the courts of common law, so that all courts now apply both systems, but where they conflict, equity prevails. Statute law includes Acts of Parliament and delegated or subordinate legislation made under powers conferred by Parliament.

The Treaty of Union between England and Scotland in 1707 included the provision that Scotland should retain its own system of law, and differences in law

and legal procedure between Scotland and the rest of the United Kingdom remain. The Scottish common law, unlike its English counterpart, has, in general, preferred broad principles to strict adherence to judicial precedent, and has often adopted and adapted ideas from other legal codes; and there are separate Scottish statutes in many fields of legislation. Nevertheless, the very close links that have been forged between England and Scotland since 1707, and the steady increase in the number of Acts of Parliament that apply uniformly throughout the United Kingdom, have narrowed the gap between the legal systems of the two countries until the points of similarity have become as numerous as the differences, and there is now a considerable volume of law common to both countries.

The leading branches of the law in the United Kingdom, as in most other countries, are civil law and criminal law. The purpose of civil law is to uphold private rights, and to redress private wrongs which do not involve moral guilt. Criminal law deals with wrongs considered injurious to the community, and consequently punishable by the State.

JUDICIAL PROCEDURE

English law provides that if anyone is arrested or detained otherwise than upon lawful grounds¹ he may sue out a writ of *habeas corpus* against the person who detained him, this person then being required to appear before the court on the day named to show cause for detention. If no cause can be shown, the prisoner must be released forthwith, and thereafter he has the right to sue the person who detained him for assault or false imprisonment. In England and Wales, the writ of *habeas corpus* may be granted by the Queen's Bench Divisional Court or by any judge of the High Court; in Scotland, the High Court of Justiciary has a similar power to release persons unlawfully detained.

Arrest to enforce a court order in civil proceedings can be effected only on a warrant of the court. In criminal cases, arrest may be effected on a warrant issued by a judicial authority on information laid before it. In certain cases, it may also be effected without warrant; but in these circumstances, the arrest is not lawful if the person making it had no reasonable grounds for his action, and civil or criminal proceedings may then be taken by the person aggrieved.

Anyone arrested on a criminal charge must be informed at once of the reason for his arrest (except when he is caught in the act) and brought speedily for trial before a magistrates' court, sitting in public. When the arrest is without warrant, a police officer may release the defendant on bail: that is to say he may discharge him temporarily subject to his entering into a recognisance, with or without sureties, for a reasonable sum of money, to appear in court at the time appointed for the trial. Unless the offence is serious, bail must be granted if the defendant cannot be brought before the court within a day. Magistrates also have discretion to grant bail, and this discretion is liberally exercised according to well-established principles. If bail is refused by the magistrates, the defendant is always entitled (unless charged with treason or murder) to apply to the High Court for bail, and he must be informed of this right.

In England and Wales, there is, in general, no restriction on the right to institute proceedings; most criminal prosecutions are initiated and conducted by the police representing the public, but a private citizen may institute proceedings if he wishes

¹ These are: in pursuance of criminal justice; for civil debt (this is now permitted only where a person of proved capacity to pay refuses to do so); for contempt of a superior court or of either House of Parliament; detention of persons found to be insane or mentally defective; detention of children by their parents or guardians.

to do so. In some cases, the consent of the Attorney-General or the Director of Public Prosecutions or, less frequently, a Government department is required before prosecution can be initiated. The Director of Public Prosecutions has power to take over any proceedings once they have been instituted and is under a statutory duty to take over certain cases, e.g., where the alleged offence is punishable by death.

In Scotland, private prosecutions or prosecutions by the police are virtually excluded. All prosecutions are instituted in the public interest by the Lord Advocate or his officers or by prosecutors appointed by the burgh or justice of the peace courts.

Criminal law presumes the innocence of the accused until his guilt has been conclusively proved by the prosecution. Therefore, it has long been the custom to deny to the prosecution any advantage, apparent or real, over the defence. The Judges' Rules, formulated for England and Wales in 1912, forbid anything in the nature of cross-examination by the police of any arrested person, and require that if such a person wishes to make a voluntary statement, he must first be cautioned that anything he says may be used in evidence; while in Scotland, although there is no exact replica of the Judges' Rules, the courts will reject as evidence statements made by the accused, unless they are satisfied that these statements have been fairly obtained. Private interrogation before an examining magistrate prior to public trial forms no part of criminal proceedings.

Every accused person has the right to employ a legal adviser for the conduct of his defence, and if he cannot afford to pay for legal representation, he may apply for legal aid at the public expense (see p. 89). This is granted at the discretion of the court, except in the case of a person charged with murder, who must be granted legal aid if his means are insufficient. Anyone remanded in custody may be visited in prison by his legal adviser, so that his case may be properly prepared. During the preparation of the case, counsel for the defence has the right to compel the prosecution to disclose all the documents in its possession which have a bearing on the case, and he may require that these documents be produced at the trial, if such a procedure would seem advantageous to the defence. During the trial, the accused has the right to hear and subsequently to cross-examine (normally through his counsel) all the witnesses for the prosecution; to call witnesses on his own account, who, if they will not attend the trial of their own free will, may be 'subpoenaed' or legally compelled to attend; and to address the court either in person, or through his counsel. But he cannot himself be questioned, unless he consents to be sworn as a witness in his own defence. The right to cross-examine a prisoner, even when he is so sworn, is limited by law, with the object of excluding inquiry into his character or into past offences not relevant to the particular charge on which he is being tried.

The Jury System

Generally speaking, all the more serious crimes, i.e. crimes known as indictable offences because a formal written accusation or 'indictment' is required for their prosecution, must be tried in a superior court before a jury. In English law, however, certain specified indictable offences may be dealt with instead at a magistrates' court if the defendant consents. Conversely a criminal case which would ordinarily be dealt with in a magistrates' court must usually be heard before a jury if the offence is punishable by more than three months' imprisonment and the defendant elects to be so tried.

A jury consists of twelve persons duly summoned in pursuance of a precept from the court. Most property owners and ratepayers (men and women alike) are

liable to be summoned for jury service if they are British subjects and are between the ages of 21 and 60, unless they are disqualified as, for example, having been convicted of an infamous crime. Members of certain professions are, however, exempt from service, and no person can be summoned to serve on any jury more than once in any one year unless all the jurors on the list have already been summoned to serve during that same year.

In trials by jury it is, broadly speaking, the duty of the judge to determine questions of law (including questions as to the admissibility of the evidence), and to acquit the accused or pass sentence, according to the verdict of the jury; but it is the duty of the jury alone to decide the issue of guilt or innocence. The judge sums up the evidence for the benefit of the jury, but he never accompanies it when its members retire to consider their verdict. The verdict of a jury must be unanimous; if its members are unable to reach agreement, the case must be retried before a new jury. Members of the jury are completely independent of both the judiciary and the executive. Moreover, although both the prosecution and the defence have the right, before the trial opens, to object to any member of the jury on the ground of his lack of impartiality, once all the members have been sworn in they are free from interference of any kind, even if, as sometimes happens, they bring in a verdict in apparent contradiction to the summing up of the judge. It is an offence to assault, threaten or attempt to corrupt a juror either before or during a trial.

Scottish legal procedure differs from the foregoing in a number of respects; notably, the verdict may be by a bare majority of the jury (which in Scotland consists of fifteen persons in criminal cases and twelve in civil cases) and, in addition to 'guilty' or 'not guilty', may also be given as 'not proven'; this last verdict (which does not exist in English law) involves acquittal in the same way as 'not guilty'.

In England and Wales, either party may insist on trial by jury in civil courts in cases involving claims for defamation, malicious prosecution, false imprisonment, seduction, breach of promise to marry, or fraud; other civil cases are tried by jury only if the court, in its discretion, so orders on the application of one or both parties to the dispute. Where there is no jury, the trial is by judge alone. In the trial of a civil action, the jury is responsible for deciding questions of fact (as in the trial of criminal cases) and also the amount of damages to be awarded to the injured party.

Jury trial in civil cases is a more commonly used procedure in Scotland than in England and the procedure in civil courts in Scotland differs in some respects from that in English courts.

At certain inquests at coroners' courts (see p. 85) in England and Wales, a jury is required to be present to return a verdict on how, when and where a deceased person died. The jury in this instance consists of not fewer than seven and not more than eleven jurors. A jury is also required at an inquest held by a coroner to decide whether objects of gold or silver found in the ground are 'treasure trove'.

Law of Evidence

Evidence in the legal sense is all the legal means, exclusive of mere argument, which tend to prove or disprove any matter of fact, the truth of which is submitted to judicial investigation. The law relating to it is, in general, the same in criminal and in civil trials; but, because of the peculiar nature of a criminal trial—the gravity of the issue, the extent to which the public interest is involved and the penalty to which the prisoner may be subjected—some of the rules, as they relate to the proof of the case against the prisoner, are applied with greater rigour and severity in the course of criminal than in the course of civil proceedings. Thus, hearsay evidence (oral or written statements made by persons not called as witnesses) is not as a rule admitted; and although the uncorroborated evidence of one

witness is, as a matter of English law, sufficient, a conviction solely on the evidence of an accomplice (or accomplices) is, in practice, never allowed, unless the judge has warned the jury of the dangers of convicting without corroboration. In Scotland, apart from a few statutory exceptions, no person may be convicted unless there is evidence of at least two witnesses, or corroboration of one witness by facts and circumstances which clearly implicate the accused person in the crime.

Admissions by an accused person before trial are accepted as evidence in a criminal trial only if they were made voluntarily without fear of prejudice or hope of advantage. The previous history of the accused may only be used against him if he has either expressly set up his own virtuous character as an argument for his innocence, or attacked a witness or the prosecutor, or given evidence against a co-defendant, in which case, should he choose to give evidence himself, he may be asked questions about his own previous convictions, provided that they are relevant and not too remote in time.

THE COURTS

The courts that apply the law in the United Kingdom are broadly speaking divided into civil and criminal courts, although no hard and fast line can be drawn since the distinction is a comparatively modern one. Quite a number of civil cases are, in fact, heard in criminal courts; while occasionally a criminal case may be heard in what is primarily a civil court.

Civil Courts in England and Wales

The more important of the civil courts in England and Wales are:

County Courts

County courts are so arranged that there is no part of the country more than a reasonable distance from one of them. They deal with the great bulk of civil litigation; over a million cases are entered in them every year, although comparatively few ever reach the stage of trial, many being settled out of court. County courts are presided over by a paid judge, who almost always sits alone, although he may sit with a jury. There are sixty-nine county court judges now in office.

Most of the county courts (of which there are nearly 400) do not sit continuously, so that one judge can preside over several courts. However, if pressure of business is so great as to cause delays in the administration of justice in any district, the Lord Chancellor may, on representations made to him by the judge of the district, appoint a person (who must previously have held office as a judge or have been a barrister of at least seven years' standing) to act for the judge at any sitting of the court.

The general jurisdiction of the county court covers all common law actions, provided that the amount claimed does not exceed £400, although some claims where the personal reputation of the plaintiff is involved, e.g., for libel, can only be tried there in exceptional circumstances. Actions involving awards in excess of this sum may be transferred to the High Court by order of the presiding judge on application by the plaintiff. Cases which fall under the specific jurisdiction of the county courts, e.g., those connected with rent restrictions, hire purchase agreements and other matters governed by statute or ministerial order, are tried irrespective of the amount involved.

In addition to the ordinary county courts, there are still a few local courts with somewhat similar jurisdiction. Most of these are survivals from the medieval borough courts, and have little or no work to do at the present time, but the

Liverpool Court of Passage, the Salford Hundred Court and the Mayor's and City of London Court are still comparatively well used.

The High Court of Justice

The High Court of Justice forms part of the Supreme Court of Judicature, which largely took its present form in 1873. It is composed of the High Court and the Court of Appeal.

The High Court sits in three divisions: the Queen's Bench Division, the Chancery Division, and the Probate, Divorce and Admiralty Division. These divisions derive from the old courts of the same names which existed before 1873, and cases are distributed between them as tradition and convenience dictate.

The Queen's Bench Division is staffed by the Lord Chief Justice and 25 puisne judges, i.e. judges without special office of their own. These judges are concerned with ordinary civil actions, e.g., debt cases, actions for damages, revenue cases, insurance cases and commercial cases, and they also hear criminal cases at assizes.

The Chancery Division is officially headed by the Lord Chancellor; but most of the work is done by seven puisne judges who remain in London all the time. The jurisdiction of the Chancery Division derives from the equity system, and its work covers actions for the administration of the estates of deceased persons, partnership actions, actions connected with trusts and mortgages, some tax cases, the care of infants' estates, and company and bankruptcy matters.

The Probate, Divorce and Admiralty Division deals, as its name implies, with the proof of wills; with Admiralty and shipping cases; and with divorce cases, heard either before High Court judges or before specially appointed divorce commissioners—often county court judges.

Appellate Courts

There are two appellate courts in civil law actions—the Court of Appeal, which is part of the Supreme Court of Judicature, and the House of Lords.

There are several *ex officio* members of the Court of Appeal, but its effective head is a judge called the Master of the Rolls, who is assisted by eight Lords Justices of Appeal. Appeals lie to the Court of Appeal from the county courts, the Mayor's and City of London Court and the civil side of the High Court. The Court of Appeal generally sits in two or three divisions, with three judges to a division.

From the Court of Appeal, a further appeal is possible to the House of Lords, with the leave of the House of Lords or of the Court of Appeal. Such appeals are usually heard by five of the nine Lords of Appeal in Ordinary, who are paid professional judges with peerages for life. In addition, the Lord Chancellor and any peers who have held high judicial office are entitled to sit. The House of Lords is the supreme court of appeal in civil cases in the whole of the United Kingdom.

Civil Courts in Scotland

Sheriff Courts

Sheriff courts in their civil capacity correspond roughly to county courts in England and Wales, but they have a wider jurisdiction unlimited by the value of the case. Scotland is divided into 12 sheriffdoms, each provided with a sheriff and a number of sheriffs-substitute. The work of the sheriff court is normally done by a sheriff-substitute, against whose judgment an appeal may be made to the sheriff or directly to the Court of Session.

Minor civil matters (actions not exceeding £5 in value) may be tried by justices of the peace.

The Court of Session

The Court of Session is the supreme civil court in Scotland. It was established in 1532 and consists of 15 judges. The court is divided into two parts—the Inner House, which is mainly an appeal court, and the Outer House, a court of first instance, where, *inter alia*, all actions for divorce are taken. The Inner House is divided into two divisions of equal status, each consisting of four judges; the first division being presided over by the Lord President, and the second division by the Lord Justice Clerk. From the Inner House, an appeal may lie to the House of Lords.

The Scottish Land Court

This is a special court in Scotland for dealing with certain agricultural matters. The court is presided over by a legal chairman, who has the rank and dignity of a judge of the Court of Session.

Criminal Courts in England and Wales

The criminal courts in England and Wales include:

Petty Sessional or Magistrates' Courts

Magistrates' courts are courts of summary jurisdiction where persons accused of all kinds of minor offences and a large number of the less serious indictable offences may be tried without a jury. Over 97 per cent of all persons convicted are convicted at magistrates' courts. These courts are also used for committal proceedings, i.e. the public conduct, by magistrates, of preliminary inquiries into indictable offences to determine whether or not an accused person should be committed for trial in a higher court.

The majority of magistrates' courts consist of not fewer than two and not more than seven unpaid 'lay' magistrates or justices of the peace, who are appointed, in each county and for each borough which has its own commission of the peace, by the Lord Chancellor, who is advised as to a county by the Lord Lieutenant¹ with the assistance of an advisory committee, and as to boroughs by separate advisory committees. There are also a few persons who are authorised by statute to act as justices, by virtue of holding some other public office, e.g., mayors of county and non-county boroughs and chairmen of county councils.

In central London, most of the courts consist of stipendiary (paid) magistrates sitting alone; under the Metropolitan Magistrates' Courts Act, 1959, their maximum number is being increased from 27 (a figure fixed in 1829) to 35. The Act also empowers the Lord Chancellor to appoint qualified persons to be acting metropolitan magistrates for temporary periods, when the number of cases to be tried is exceptionally high. Some of the larger towns also have stipendiary magistrates.

Juvenile Courts in England and Wales are specially constituted magistrates' courts which deal with young people under 17 years of age who are charged with any offence except homicide, or are brought before the courts as being in need of care or protection or beyond control, or as persistent truants. Juvenile courts also deal with most applications for the adoption of children.

Outside the London magistrates' courts area, the justices for each petty sessional division elect from their number a panel of justices specially qualified to deal with juvenile cases. The panel for the London area is appointed by the Home Secretary.

A juvenile court consists of not more than three justices drawn from the panel and must, except in special circumstances, include a man and a woman. A juvenile

¹ See footnote p. 44.

court must sit either in a different room or building from that in which other courts are sitting, or on a different day. Only persons within certain specified categories are admitted and only limited publicity is allowed.

Domestic Proceedings are also tried by not more than three justices, of whom one should be a man and one a woman. The hearing of domestic proceedings is separated from other business and, as in juvenile courts, the public is excluded.

Courts of Quarter Sessions

There are two different kinds of quarter sessions—county sessions and borough sessions; both are normally held four times a year, although, when necessary, additional sittings may be held.

Each of the 65 courts of county quarter sessions is presided over by a legally qualified chairman or deputy chairman, who may or may not draw a salary, sitting with a number of the magistrates of the county. In London, Lancashire and Middlesex, where the courts have continuous sittings, the chairman and deputy chairman usually preside alone. In the 96 boroughs which hold separate quarter sessions, most of the courts, which do not sit continuously, are presided over by a Recorder (usually a part-time judicial officer), who is a salaried barrister, as sole judge. Trial by jury applies at both borough and county sessions.

The jurisdiction of quarter sessions covers all but the most serious indictable offences, but the courts are debarred from trying any crime that carries the death sentence or (subject to certain exceptions) imprisonment for life.

Assizes

Courts of assize are branches of the High Court of Justice. They are held in the county towns and in certain big cities three times a year, a Queen's Bench judge or a Commissioner of Assize (who may be a barrister commissioned to act as a judge) presiding. The assize judges work on circuits covering England and Wales, and travel from one county town to another in the course of their duties. They can try any indictable offence committed in the county.

At the winter and summer assizes, civil business as well as criminal may be taken, but except in a few large towns the autumn assize is confined to criminal cases.

Crown Courts

Crown courts are courts which were established at Liverpool and Manchester by the Criminal Justice Administration Act, 1956, to act as courts of assize in and for the West Derby Division of Lancashire and the Salford Division of Lancashire. They also act as courts of quarter sessions for the cities of Liverpool and Manchester. The Crown courts are presided over by the Recorders of Liverpool and Manchester, who are whole-time judicial officers.

The Central Criminal Court

The Central Criminal Court at the Old Bailey acts as the court of assize for the criminal business of London, Middlesex and parts of the home counties. The judges include: a judge chosen, in rotation, from the Queen's Bench Division for each monthly session of the court; the Recorder of London; the Common Serjeant; and two additional judges of the Mayor's and City of London Court.

Criminal Appeals

Appeals may be made direct from the magistrates' court to the High Court on a point of law; but the more usual kind of appeal is that of a convicted person against his conviction or his sentence. Appeals of this kind from a magistrates'

court are heard in the counties by the Appeal Committee of Quarter Sessions, consisting of between three and twelve magistrates, and in the boroughs by the Recorder; in neither case is a jury required.

Appeals against convictions or sentences by quarter sessions, assizes or Crown courts go to the *Court of Criminal Appeal*. Appeals on questions of law may be brought as of right, but on other grounds, only by leave.

The Court of Criminal Appeal consists of the Lord Chief Justice and a number of Queen's Bench judges; three in session is the usual number.

A further appeal from the Court of Criminal Appeal to the House of Lords on a point of law can be brought if the Attorney-General grants a certificate that 'the decision of the Court of Criminal Appeal involves a point of law of exceptional public importance and that it is desirable in the public interest that a further appeal should be brought'. Appeals of this kind are very rare.

Criminal Courts in Scotland

Criminal prosecutions in Scotland are mainly dealt with in the sheriff court sitting under summary procedure, i.e. the sheriff without a jury. Minor offences are tried under summary procedure in police courts in burghs and in justice of the peace courts in counties. Any summary court may sit as a juvenile court when hearing charges involving only persons under 17 years of age and, in some areas, there are specially constituted juvenile courts. The sheriff court also sits under solemn procedure, i.e. the sheriff with a jury, to hear the more serious cases prosecuted on indictment.

The most serious cases are taken under solemn procedure in the *High Court of Justiciary*, which is the supreme criminal court of first instance. It consists of the Lord Justice General (who is also the Lord President of the Court of Session), the Lord Justice Clerk and thirteen Lords Commissioner of Justiciary who are also judges of the Court of Session. The seat of the court is in Edinburgh, but the judges go on circuit to preside at trials in other towns. The High Court of Justiciary is also the appeal court from the summary courts and, sitting as a court of criminal appeal, hears appeals in indictment cases. Appeals are heard by three or more judges; there is no further appeal to the House of Lords.

Courts in Northern Ireland

Both civil and criminal courts in Northern Ireland are similar to those in England and Wales with some minor modifications to suit a smaller community. The main difference is that all petty sessional cases are dealt with by resident magistrates, who correspond to the stipendiary magistrates of England and Wales. The inferior courts, that is to say the courts where the less serious cases are tried, are administered by the Parliament of Northern Ireland; the administration of the superior courts has been reserved to the United Kingdom Parliament.

Coroners' Courts

Where a person appears to have died a violent or unnatural death, or a sudden death of which the cause is unknown, or in certain other circumstances, the death must be reported to the coroner (who may be a barrister, a solicitor, or a medical practitioner of not less than five years' standing, appointed by a county or a county borough council) within whose jurisdiction the body is lying. When a death is reported to the coroner, he inquires how, when, and where the deceased died; he may hold an inquest in court for this purpose, and he must hold an inquest if he has reasonable cause to believe that the deceased has died a violent or unnatural death or has died in prison or in circumstances for which an Act of Parliament

provides that an inquest must be held. A jury must be summoned in certain cases, including those in which there is reason to suspect that the death was due to murder, manslaughter, or infanticide, or was caused by an accident arising out of the use of a vehicle on the public highway. If the jury returns a verdict of murder, manslaughter or infanticide by a particular person, the coroner commits that person for trial at assizes. If the death is merely a sudden death of which the cause is unknown, the coroner need not hold an inquest, but may order a post-mortem examination to ascertain the cause of death.

The discovery of gold or silver objects hidden in the soil or in buildings must be reported to a coroner, if the original owner cannot be traced. The coroner then holds an inquest with a jury to inquire whether the objects are 'treasure trove' and who was the finder thereof. If it is decided that the objects are treasure trove, then, though the law is that treasure trove vests in the Crown, the declared finder will either receive them back or be paid their full market value.

In Scotland, the office of coroner does not exist. The Procurator Fiscal inquires privately into all sudden and suspicious deaths in his district and may report the results of his inquiries to the Crown Agent in order that Crown Counsel may consider what proceedings, if any, are required.

Ecclesiastical Courts

The established Church of England has its own ecclesiastical courts, which constitute a graduated hierarchy. They include the Court of the Archdeacon, the consistory court of the bishop of each diocese and the provincial courts of the archbishops of Canterbury and of York.

The ecclesiastical courts, which are still courts in the full sense of the word, have jurisdiction only in matters of purely ecclesiastical concern.¹

Administrative Tribunals

A number of administrative tribunals exist in various parts of the United Kingdom for the exercise of special judicial functions; broadly speaking they fall into three groups:

- (1) those which deal with a class of dispute in which a Government department or public authority is interested, e.g., local valuation courts (rating), general and special commissioners of inland revenue (income tax), and pensions appeal tribunals;
- (2) those which deal with a class of dispute where specialised knowledge or experience on the part of the tribunal is required, e.g., the Lands Tribunal (assessment of values of interest in land), rent tribunals (assessment of fair rents for furnished premises), and the Restrictive Practices Court (investigation of restrictive trading practices); and
- (3) those which enforce professional discipline, e.g., the General Medical Council (doctors), and the Disciplinary Committee of the Law Society (solicitors).

Appeals from certain of these tribunals lie to the appropriate minister (if there is one) or, on a point of law, to the superior courts of England and Wales, Scotland or Northern Ireland, as the case may be.

An advisory Council on Tribunals (established under the Tribunals and Inquiries Act, 1958) exercises general supervision² over the tribunals and reports on

¹ See also p. 195.

² Excluding supervision of the professional disciplinary tribunals, with which the ordinary public are not concerned.

particular matters. The members of the council are appointed jointly by the Lord Chancellor and the Secretary of State for Scotland; matters peculiar to Scotland are dealt with by the Scottish committee of the council. Responsibility for the appointment of most chairmen of administrative tribunals (hitherto appointed by ministers) was transferred by the 1958 Act to the Lord Chancellor, or the Lord President of the Court of Session in Scotland, and their consent is also required to the dismissal of members of the tribunals.

Military Courts

The jurisdiction of military courts, which are known as courts-martial, is exclusively over persons subject to military law. Appeals lie to the Courts-Martial Appeal Court, which was set up by the Courts-Martial (Appeals) Act, 1951, and from that court to the House of Lords¹ if the Attorney-General certifies that its decision involves a point of law of exceptional public importance and that it is in the public interest that a further appeal should be brought. The powers of courts-martial are limited to those conferred on them by statute, and if these powers are exceeded, the person injured has his remedy in the High Court.

THE JUDICIARY

The judiciary of the United Kingdom is independent. That is to say, it is free to administer the law under the protection of the law without fear or favour. All judges, from those of the House of Lords and the superior courts to the 'lay' magistrates or justices of the peace, must not only be, but must appear to be, completely impartial, for it is of fundamental importance that 'justice should not only be done, but should manifestly and undoubtedly be seen to be done'.

The courts of the United Kingdom are the Queen's courts in that 'all jurisdiction of the courts is either indirectly or immediately derived from the Crown', but since the end of the seventeenth century it has been established that the executive cannot disturb or delay the course of common justice, attempt to force the judges to act otherwise than impartially, or use the prerogative powers of the Crown to create courts to administer any system of law other than common law. Judges always have been and still are selected from the ranks of practising barristers; and neither their training nor their career is in any way influenced by the State.

The independence of the judiciary *vis-à-vis* the legislature is likewise strictly observed. Originally laid down by the Act of Settlement, 1701, the law governing the matter was re-enacted in the Supreme Court of Judicature (Consolidation) Act, 1925, which provides that all judges of the High Court and the Court of Appeal, with the exception of the Lord Chancellor (who is a member of the Cabinet), shall hold their offices during good behaviour, subject to a power of removal by the Sovereign on an address presented by both Houses of Parliament. During the centuries that have passed since 1701, only one such address has been moved (against a judge convicted of misappropriation of funds, in 1830); and it can be stated with confidence that Parliament would never use this means to attempt to interfere with judicial independence. Similarly, although no court in the United Kingdom would ever question the validity of an Act of Parliament which had been duly passed, legally promulgated, and published by the proper authority, it might, through its interpretation of the statute, come to a decision contrary to the policy of the Government which introduced the Act. In such a case, it would be open to the Government to persuade Parliament to clarify or amend the statute, or to

¹ There have been no appeals as yet to the House of Lords under this provision.

pass a new Act. It would not be open to it to penalise the judge or to try to influence the court in any other way.

Administration of the Judicial System

There is no Minister of Justice in the United Kingdom. The central responsibility for the administration of the judicial system in England and Wales lies partly with the Lord Chancellor and partly with the Home Secretary. The Prime Minister is also concerned in that he is responsible for recommending to the Crown the appointment of the Lords Justices of Appeal and that of the Lords of Appeal in Ordinary.

Apart from the appointment of the Lords Justices of Appeal, Crown appointments to the High Court bench are made on the recommendation of the Lord Chancellor, who appoints justices of the peace and is also responsible for recommending to the Crown the appointment of county court judges (except in Lancashire where they are nominated by the Chancellor of the Duchy of Lancaster), Recorders of boroughs and metropolitan and stipendiary magistrates. The administrative business of the Supreme Court of Judicature and the appointment of court officials is partly in the hands of the Lord Chancellor and partly in the hands of the appropriate judges. The Lord Chancellor is concerned with legal procedure in that he is a member of the Rule Committee which makes the rules of the Supreme Court, and that he appoints the County Court Committee and has power to alter or disallow the rules made by it. He is also concerned with law reform in that he refers questions on this subject (save in the field of criminal law, where the Home Secretary is primarily responsible) to the Law Reform Committee and the Private International Law Committee (both established in 1952), and that the reports of these committees, which often become the basis of legislation, are presented to him.

The Home Secretary is responsible for the general administration of magistrates' courts in England and Wales, except in relation to their judicial functions in which they can be controlled only by the Queen's Bench Division of the High Court. He is also responsible for approving appointments of clerks to justices made by magistrates' courts committees, of which there is one for each county and county borough and for certain non-county boroughs. Magistrates' courts committees exercise local responsibility for the administration of magistrates' courts.

In Scotland, the Prime Minister makes recommendations for the appointment of the Lord Justice General and Lord President and also of the Lord Justice Clerk. Power of submission for appointment of all other judges lies with the Secretary of State for Scotland on the nomination of the Lord Advocate. The High Court of Justiciary and the Court of Session are administered by the Clerk of the Justiciary and his staff and the principal Clerk of Session and his staff respectively. Powers of appointment and removal of justices of the peace, formerly held by the Lord Chancellor, were transferred in 1955 to the Secretary of State for Scotland, who is also responsible for the staffing and general organisation of the sheriff courts.

THE LEGAL PROFESSION

The legal profession of England and Wales is divided into two classes of lawyers—barristers and solicitors. The distinction, which is due mainly to historical causes, is found also in Northern Ireland, in Scotland (where members of the Bar are known as advocates), and in certain other parts of the Commonwealth.

No hard and fast line can be drawn between the work of the solicitor and the work of the barrister, since there are many barristers who do little advocacy, and there are solicitors who do little else, and who have made considerable reputations

for themselves in the courts in which they are permitted to appear. In general, however, it may be said that solicitors undertake legal business for lay clients, while barristers advise on legal problems submitted through solicitors and conduct legal proceedings in the higher courts.

A barrister is required to have reached an accepted educational standard, to have passed the legal examinations conducted by the Council of Legal Education and to have become a member of one of the four Inns of Court—Gray's Inn, Lincoln's Inn, the Middle Temple and the Inner Temple. A barrister with a substantial junior practice may apply to the Lord Chancellor for a patent appointing him Queen's Counsel—a proceeding that is known as 'taking silk'. The highest appointments in the legal profession, including those of Attorney-General and Solicitor-General, are made from among barristers who have become Queen's Counsel. The professional conduct of a barrister is subject to the scrutiny of the General Council of the Bar; but disciplinary powers are vested exclusively in the Benchers of the Inns of Court.

A prospective solicitor must be considered suitable by the appropriate committee of the Law Society (the professional organisation of solicitors) and he must enter into 'articles of clerkship' with a practising solicitor of not less than five years' standing before he can begin his professional career. The term of articles lasts for three or five years, depending upon the educational qualifications of the student. An articulated clerk must pass the necessary examinations held by the Law Society and, unless he has been a barrister or is a law graduate of a university, he is generally required to attend a course of studies at a recognised law school. Once a solicitor is qualified, he may become a member of the Law Society.

In Scotland, the conditions for admission as, and the standing of, advocates and solicitors are much the same as those applying in the case of barristers and solicitors in England and Wales. The analogous professional organisations are the Faculty of Advocates and the Law Society of Scotland.

LEGAL AID

Schemes for free legal assistance to persons of slender means and resources have existed for centuries in some courts, to a limited extent in England and Wales and to a somewhat greater extent in Scotland. The existing schemes were revised in 1949 when the Legal Aid and Advice Act and the Legal Aid and Solicitors (Scotland) Act were passed. These Acts, which are not yet fully in operation, were introduced to improve and extend the existing arrangements in civil proceedings so that no one would be financially unable to prosecute a just and reasonable claim or to defend a legal right, and to make the facilities already available in criminal proceedings more easily accessible to those who needed them. The Acts also provided that solicitors and barristers acting for persons receiving legal aid should no longer be required to act gratuitously in civil cases, but should be remunerated for their services from public funds.

Legal Aid in Civil Cases

Legal aid in civil cases is now available to persons whose income, computed in accordance with rules applied by the National Assistance Board, does not exceed £420 a year, and whose capital, as so computed, does not, save in exceptional circumstances, exceed £500. Where an assisted person can afford to make a contribution to the costs of his case, he is required, as a condition of receiving legal aid, to pay an amount which is settled with due regard to his financial resources.

In England and Wales, legal aid in civil cases is already available in connection

with proceedings in the High Court, in the Court of Appeal, in county courts and in certain local courts of similar standing. Eventually the scheme will cover representation in courts of all types, from magistrates' courts to the House of Lords. The scheme is operated through the Law Society under the general guidance of the Lord Chancellor. The cost is met from the Legal Aid Fund, drawn from three sources: contributions from assisted persons; costs recovered from opposite parties in litigation; and a grant from the Exchequer.

For the purposes of the scheme, England and Wales are divided into twelve areas. In each area a committee of solicitors and barristers, known as an area committee, is responsible for the administration of the scheme. These committees are responsible for setting up legal aid centres to which anyone seeking legal aid may apply. The committees hear the facts, and if they consider that there is a *prima facie* case they give it their support. The person who wishes to bring the action is then allowed to select from a panel a solicitor and, if necessary, a barrister, to conduct his case. Certain types of action, including breach of promise to marry, and libel and slander, are excluded from the scheme.

In Scotland, the legal aid scheme is administered by the Law Society of Scotland through a supervisory central committee, the Supreme Court Committee and twenty-one local committees. Legal aid is at present available for civil proceedings in the Court of Session and the sheriff courts. An applicant for legal aid in Scotland is required to show a 'probable cause' and produce in support of his application a statement corroborated according to the requirements of Scottish law.

Legal Aid in Criminal Courts

Free legal aid is available in the criminal courts in England and Wales under the Poor Prisoners' Defence Act, 1930, and, in case of appeal, under the Criminal Appeal Act, 1907, and the Summary Jurisdiction (Appeals) Act, 1933. The Legal Aid and Advice Act, 1949, makes certain procedural changes in the system and, when fully implemented, will transfer financial responsibility for paying for free legal aid from local to central funds. It also provides that solicitors and barristers should receive fair payment for work actually and reasonably done.

The Costs in Criminal Cases Act, 1952, empowers the courts, in the case of an indictable offence, to order the reasonable costs of the defence to be paid out of local funds when the accused has been discharged by the magistrates' court or acquitted. Under the Act, a magistrates' court has power, if it dismisses an information on summary trial, to order such costs as it considers just and reasonable to be paid to the accused by the prosecutor.

Pending the full implementation of the Legal Aid and Solicitors (Scotland) Act, legal aid in criminal cases is afforded to poor persons in Scotland under the Poor's Roll system, which is administered on a voluntary basis by the legal profession with the help of a grant from Government funds.

In Northern Ireland, free legal aid in criminal cases is afforded to poor persons under the Criminal Justice (Northern Ireland) Act, 1945. The cost of providing free legal aid is met from public funds.

Legal Advice

Oral advice on legal matters is available to persons who cannot afford to obtain it in the ordinary way. Advice is given by practising solicitors (paid out of the Legal Aid Fund at the rate of £1 for every half-hour) without charge to those having less than £75 capital (excluding the value of their dwelling house, furniture, clothes and the tools of their trade), and for 2s. 6d. to those having an income in the seven days preceding the application of less than £4 10s., after deducting 30s. if married

and maintaining a spouse, 25s. for each dependent child, and 30s. for any adult dependant, as well as income tax and national insurance, industrial injury or national health contributions.

TREATMENT OF OFFENDERS

The chief aims of the penal system of the United Kingdom are deterrence and reformation; its effectiveness depends on its total impact—fear of detection, public trial and conviction and the possibility of punishment—and not solely upon the treatment of the offender, which today is based increasingly on the recognition that the community has a responsibility not simply to punish or reject the law-breaker but to prevent him from returning to crime.¹ Research into the causes and prevention of delinquency which, according to statistics, has shown a marked increase since the end of the second world war, is at present being undertaken by a research unit in the Home Office, by a number of universities and by other bodies concerned with these problems. An Institute of Criminology has recently been established at Cambridge University.

Penalties

Except in relation to murder and certain rare offences for which there is a fixed penalty, the court has discretion to select the penalty (within maxima prescribed by law) that it considers most suitable in the light of the circumstances of the offence and the offender. In general, the courts have power to impose either imprisonment or a fine for serious offences (both—in certain cases); while most minor offences are punishable by a fine only, with the alternative of imprisonment if the fine is not paid. Moreover, the court has discretion, instead of sentencing an offender, to discharge him absolutely, to place him on probation, or, in England and Wales only, to discharge him conditionally (i.e. subject to the condition that he commits no offence during a specified period not exceeding twelve months). There are special provisions governing the treatment of young offenders; and the Criminal Justice Act, 1948, and the Criminal Justice (Scotland) Act, 1949, provide that courts shall not sentence a person under 21 years of age to imprisonment unless they consider that no other method of dealing with him is appropriate.

Two special types of treatment—corrective training and preventive detention—have been devised to deal with the persistent offender. A sentence of corrective training of not less than two nor more than four years (seven years in Northern Ireland) may be imposed on offenders of 21 years of age or over if they are convicted of an offence punishable with imprisonment for a term of two years or more and have been convicted of such an offence on at least two previous occasions since attaining the age of 17. Sentences of preventive detention (primarily for the protection of the public) may be imposed on persons of not less than 30 years of age, who are found guilty of offences punishable with imprisonment for a term of two years or more and have been convicted of such offences on at least three previous occasions since attaining the age of 17, and have been sentenced to borstal training, imprisonment or corrective training on at least two of these occasions. A sentence of preventive detention runs for not less than five years (three in Northern Ireland) or more than 14 years, as the court decides.

¹ Some aspects of policy relating to the treatment of offenders, including young offenders, have been examined in a White Paper, *Penal Practice in a Changing Society*, Cmnd. 645, published in 1959.

Under the Homicide Act, 1957, the death penalty for murder is confined to those forms of murder (known as 'capital murder') which strike most directly at the maintenance of law and order and the public peace, i.e. murder done in the course of furtherance of theft, murder by shooting or by causing an explosion, murder committed to escape lawful arrest or to effect or assist escape or rescue from legal custody, murder of a police officer (or person assisting him) acting in the execution of his duty, or murder by a prisoner of a prison officer (or person assisting him) acting in the execution of his duty. The penalty for murder not in capital categories is imprisonment for life, except that the death penalty continues to apply where a person who is convicted of murder has previously been convicted of another murder committed in Great Britain on a different occasion. Persons under the age of 18 years at the time that the crime was committed are not sentenced to death or to life imprisonment, but 'to be detained during Her Majesty's pleasure'. If the defence is able to prove that a person accused of murder was suffering from such abnormality of mind as substantially impaired his mental responsibility for the killing, he is liable to be convicted only of manslaughter.

It is the long-established practice for the Home Secretary or the Secretary of State for Scotland to review every capital case before the law is allowed to take its course and to consider whether there are grounds for advising the Crown to exercise the prerogative of mercy. Where a reprieve is recommended, the sentence of death is commuted to one of imprisonment for life. A person subject to a sentence of life imprisonment is liable to be detained for the rest of his life, but the Home Secretary may, if he thinks fit, release him on licence at any time. In recent years, the average period served by persons whose death sentences have been commuted has been about nine years, but the period varies according to the circumstances of the particular case and the question of whether the prisoner's discharge would be likely to involve risk to the public.

The Homicide Act does not apply to Northern Ireland, but the exercise of the prerogative of mercy in all capital cases is considered by the Northern Ireland Cabinet, which tenders advice to the Governor in his capacity as representative of the Crown.

Administrative Authorities

In England and Wales, general responsibility for all institutions for the treatment of offenders is vested in the Home Secretary. His statutory powers and duties in this connection include the making of rules for the governance of such institutions, the recommendations of persons for appointment by the Crown as prison commissioners, and the appointment of boards of visitors.

In the discharge of these duties, the Home Secretary is advised by the Advisory Council on the Treatment of Offenders, which also acts as the National Working Group for the Economic and Social Council of the United Nations, and as the National Committee of the International Penal and Penitentiary Commission.

Responsibility to the Home Secretary for the administration of prisons, borstal institutions and detention centres in England and Wales lies with the Prison Commission, assisted by inspectors and by a professional and technical staff. The Prison Commission consists of not more than five commissioners (who are appointed by the Crown), including the chairman who is appointed to that office by the Home Secretary. There are also a number of assistant commissioners who are inspectors under the Prison Acts.

The general supervision of penal institutions is the responsibility of visiting committees appointed by the justices for those prisons to which convicted persons

are committed direct from their courts, or of boards of visitors appointed by the Home Secretary for the other prisons and institutions. The main functions of the committees and boards are: to act as the superior disciplinary authority of the prison or institution; to constitute an independent judicial body to which any prisoner or inmate may make a complaint or request; and to report direct to the Home Secretary, both by formal annual report and as occasion may require, on every aspect of the administration of the prison. In borstal institutions and preventive detention prisons, the boards also advise the Prison Commissioners on the release of the inmates on licence.

The prison system in Scotland is based on principles similar to those applied in England and Wales, and the Secretary of State for Scotland is advised in the discharge of his duties by the Scottish Advisory Council on the Treatment of Offenders. In Northern Ireland, the system is the responsibility of the Minister for Home Affairs.

Prisons

The increase in crime during recent years has led to severe overcrowding in prisons and has strained the resources of other agencies, such as borstals, approved schools and the probation service. Measures to deal with the problems include plans for a substantial increase in the number of prisons and the other institutions mentioned above, and the reconstruction or replacement of a number of old prisons.

Prisons in England and Wales are of the following types: local prisons of the ordinary type, which receive all classes of prisoners direct from the courts; local prisons of a special type, which may be open or walled, for short-sentence prisoners, chiefly first offenders; four young prisoners' centres for the reception of youths under 21 years of age with sentences of three months or over, as far as accommodation permits; regional training prisons (some of which are open) for first offenders and trainable prisoners of other categories, including those sentenced to corrective training; and central prisons for habitual law-breakers, preventive detention prisoners and long-term prisoners of the 'Star' class¹—one for the latter class is an open prison.

In Northern Ireland, with its smaller population, the necessity for several kinds of prison for the separation of various classes of prisoners does not arise to the same extent as in England and Wales. The Scottish system of classification of prisoners is broadly the same as that of England and Wales; but each prison in Scotland accommodates more than one classification group. There are 48 prison establishments in England and Wales, 9 in Scotland, and 2 in Northern Ireland.

Full-time prison officers of all ranks, except chaplains, are permanent civil servants. In 1959, prison staff of all grades in England and Wales numbered about 8,000. Some 8 per cent of this number were women. In Scotland, in 1959, the prison staff numbered 803, including 66 women, and in Northern Ireland the prison staff of 199 included 20 women.

Classification of Prisoners

Every person committed to prison is first received in the local prison serving the court from which he is committed. Subsequently, he may either serve his whole sentence at the local prison or he may be sent to another institution, depending on his age, the length and nature of his sentence, and his personal history and character.

The object of classification is first to ensure the separation of the sexes, of young persons from adults, of untried prisoners from convicted prisoners and of civil

¹ 'Star' class prisoners are those who have not previously been convicted of serious crime and are not of habitually criminal or depraved habits.

prisoners from criminal prisoners; secondly to prevent contamination, among convicted prisoners, of the better by the worse; and thirdly to provide training appropriate to their needs for those among convicted prisoners who seem likely to benefit therefrom.

Training

The main elements of prison training (including corrective training) have been defined as (1) work of a kind likely to help to fit prisoners to earn their living after release, with technical training in skilled trades for certain persons, (2) suitable educational facilities, and (3) opportunities for the development of a sense of personal responsibility, including (for suitable persons) training in open conditions.

A system of vocational training courses in skilled trades, designed to enable the trainees to take the examinations of recognised examining bodies, is being developed in central and training prisons. In 1959, there were 75 such courses, covering 23 different trades in the various prisons, and the standard of training was such that just under 70 per cent of entrants passed the external examinations.

Employment

Prison industries in England and Wales are controlled by the Director of Industries and Stores, who is a member of the Prison Commission. The director, who is advised by an experienced industrialist appointed on a voluntary basis by the commission, has a head office staff of technical officers and supervisors (including a supervisor of farms and gardens), and industrial managers at the prisons. In Scotland, responsibility for the general direction of prison industries rests with the Supervisor of Industries, who is a member of the Scottish Home Department.

Except in local prisons, where the hours are shorter, most prisoners spend about 40 hours a week in the prison workshops or in other employment such as building, farm work, domestic work and gardening in the prison precincts. A few prisoners are employed outside the prisons on various projects of public value, such as agriculture, land drainage, road works, and forestry.

All prisoners are entitled to earn a limited amount from the first day of their sentence; in England, Wales, and Scotland, these amounts may be increased for satisfactory output after a specified lapse of time. In Northern Ireland, there is a progressive system of earnings, which are not related to output or to work done.

Education

Educational schemes are provided in prisons in England, Wales, and Scotland by the local education authorities with the advice of the Government departments responsible for education in their respective countries, and in Northern Ireland by the Ministry of Home Affairs. The local authorities are reimbursed for the full cost of their services, and the work in England and Wales is under the organisational control of the Assistant Commissioner for Education in the Prison Commission. Evening institutes have been established; and a wide range of correspondence courses is made available for those who have a serious desire to improve their education and qualifications.

Educational schemes are supplemented by periodical lectures, film displays, concerts, and dramatic performances. Prisoners may also use the prison library, which in most cases is now stocked by the county, city or borough library committee.

Psychiatric and Psychological Services

Three prisons and one borstal in England and Wales and one prison in Scotland have their own psychiatric clinics (with qualified medical staff, visiting psychotherapists and psychiatric social workers) to which inmates may be transferred if,

in the opinion of the relevant medical officer, they would benefit by psychiatric treatment. Elsewhere, prisoners may, if necessary, be sent for treatment to psychiatric hospitals outside the prisons. Arrangements may also be made (for prisoners serving short-term sentences) for appropriate treatment after release. The building of a central psychiatric prison hospital, with accommodation for 300 patients, was begun in 1959.

There is also a psychological service for prisons, whose officers are employed to assist governors and medical officers in their work of examining and classifying prisoners, and to advise on methods of treatment.

Religion and Welfare

A chaplain of the Church of England (in Scotland of the Church of Scotland and in Northern Ireland, of the Church of Ireland, and Presbyterian Church) and a Roman Catholic priest are appointed to every prison. Ministers of the Methodist Church and of other denominations are either appointed or specially called in as required. Regular services are held, and chaplains and other ministers may visit prisoners in their cells. Welfare is generally the responsibility of the chaplain and welfare officers of local aid societies; at some local prisons, full-time welfare officers have been appointed.

Prisoners may be visited by their relatives and friends at specified intervals and, in England and Wales, by recognised prison visitors asked to serve in this field by the Prison Commissioners. The voluntary work of these visitors is co-ordinated and guided by the National Association of Prison Visitors.

Privileges and Discipline

On reception under sentence, all prisoners, except those sentenced to imprisonment for life, are credited with remission of one-third of their sentence (one-fourth in Northern Ireland in respect of sentences of less than two years), provided that this does not reduce their sentence below 31 days (in Scotland, 30 days). The Home Secretary may at any time, if he thinks fit, release on licence anyone sentenced to life imprisonment. A prisoner sentenced to corrective training becomes eligible for release on licence after serving two-thirds of his sentence. A prisoner sentenced to preventive detention becomes eligible for release on licence after serving two-thirds or five-sixths of his sentence (in Northern Ireland, two years, or one-half of his sentence, whichever is greater) according to an assessment of his character, conduct and prospects, which is made after he has served a substantial part of his sentence. In addition, at successive stages of a prisoner's sentence, he becomes entitled to additional privileges; for example, he is allowed to have meals and recreation with his fellow prisoners and to have some of his personal belongings in his cell.

For breaches of discipline in prison, the prison governor or the visiting committee or the board of visitors have power to order forfeiture of remission (or postponement of the date of release) and forfeiture of privileges.

Discharge and After-Care

Pre-release courses (at which experts from outside hold an open forum with the prisoners nearing their release, on the domestic, social and industrial problems with which they are likely to be faced) are conducted at all prisons. Specially selected men amongst those sentenced to preventive detention and long-term imprisonment are allowed to work in ordinary civilian jobs outside prison, as free men, during the last six months of their sentence; hostels for this purpose have been or are being established at ten prisons in areas where there are reasonable prospects of employment. Home leave (allowing five clear days at home) is

extensively granted to many categories of prisoners with sentences of two years or over towards the end of their sentences to enable them to make family adjustments and to make contacts with potential employers.

On discharge, prisoners from local prisons are assisted by discharged prisoners' aid societies, which are local and voluntary bodies supported partly by private and partly by public funds. These societies are assisted by prison welfare officers employed by the National Association of Discharged Prisoners' Aid Societies in England and Wales which is a central, co-ordinating body, depending on a grant from public funds for its administrative expenses, and, in Scotland, by the Scottish Home Department. For persons discharged from other prisons and from borstals (who are, in general, subject to statutory supervision), after-care in England and Wales is in the hands of the Central After-Care Association, a voluntary body financed from public funds and governed by a council appointed by the Home Secretary, which includes in its membership representatives of the Ministry of Labour and National Service, of the National Assistance Board and of the probation service. The After-Care Council (appointed by the Secretary of State for Scotland) carries out similar duties in Scotland.

In England and Wales, the association works through local associates, usually probation officers, and, in Scotland, the council works through voluntary guardians. The officers of the local organisations make all arrangements for the reception of the prisoner after his discharge, and will advise, assist and befriend him for as long as is necessary or required by statute.

In Northern Ireland, the after-care of all prisoners is carried out by the discharged prisoners' aid societies with the help of probation officers.

Treatment of Young Offenders

Under the English and Scottish legal systems, a child under the age of eight cannot be charged with an offence. A child between eight and 14 years old, who is charged with an offence other than homicide, must be dealt with in a juvenile court, unless charged jointly with an adult.

In England and Wales, a young person between 14 and 17 years of age charged with an indictable offence may be dealt with summarily (as is usually the case) or committed for trial by jury. In certain cases young persons may claim to be tried by jury, though this right is rarely exercised. In Scotland and Northern Ireland, all young persons up to the age of 17 years who are charged with offences must be dealt with in juvenile courts, unless they have been charged in conjunction with adult offenders.

The following methods of treatment are available in law for dealing with children and young persons who have been found guilty of committing an offence: absolute discharge; conditional discharge (in England and Wales only); fines (imposed upon the offender or, in certain circumstances, upon his parents); probation; committal to the care of a fit person (normally the appropriate local authority) until the age of 18; or a period of detention in one of the different types of institution which are available when institutional treatment is considered necessary.¹

Remand Homes

In England, Wales, and Scotland, remand homes are provided by local authorities for the custody of boys and girls under the age of 17 before their appearance in

¹ A committee was appointed by the Home Secretary in 1956 to inquire into, and make recommendations, *inter alia*, on the working of the law in England and Wales in respect of young offenders; the constitution, jurisdiction and procedure of juvenile courts; and the remand home, approved school, and approved probation home systems.

court, or between court appearances (while inquiries are made as to the best method of treatment for them), while they are awaiting vacancies in approved schools, or for a short period (up to a month) of punitive detention. Facilities for observation are provided in remand homes, and valuable reports can thus be made to guide those responsible for the future of young offenders.

In Northern Ireland, the responsibility for providing or arranging for the provision of remand homes rests with the Minister of Home Affairs.

Approved Schools

Approved schools are residential schools for the education and training of young offenders, and children committed to them by the courts as in need of care or protection. These schools may be provided by local authorities, by voluntary organisations concerned with the welfare of children on a national scale, or by local committees formed by people interested in such work. In England and Wales, the schools must be approved by the Home Secretary; in Scotland, by the Secretary of State for Scotland; and in Northern Ireland, by the Minister of Home Affairs. The number of approved schools in England and Wales in 1959 was 119. There are 20 approved schools in Scotland, and five (known as training schools) in Northern Ireland.

The schools are for boys only or for girls only. They are classified according to the ages of the children on admission, and include separate schools for Roman Catholic children. The assignment of a child to a school in the appropriate age group is determined by such considerations as the location of the school in relation to the child's home, the type of training provided, and the probable reaction of a child to the individual personalities of the staff.

In general, the education given in approved schools follows the lines of that given in ordinary schools, with vocational training for older boys and girls: the emphasis is on character building, and close attention is given to after-care.

The period during which a child or young person may be detained in an approved school is determined by law. In Great Britain it is three years, except for children under the age of 12 years and 4 months at the time of committal, who may be kept until the age of 15 years and 4 months, and those over the age of 16 on committal, who can be detained only up to the age of 19, or 19½ if they have been found guilty of absconding or of serious misconduct in an approved school. Managers of all approved schools are under an obligation to review the progress of each child in their school towards the end of the first year of detention and thereafter at least quarterly, with a view to granting a release on licence as soon as the situation warrants it.

Statutory responsibility for after-care rests on the school managers. A boy or girl on release remains under the care of the managers during the periods of licence and supervision. The period of licence lasts until the expiry of the time for which the boy or girl might have been legally detained in the school. The period of supervision lasts for three years more, or until the boy or girl reaches the age of 21, whichever is the shorter period. Managers are assisted in their after-care work by welfare officers and social service organisations.

Remand Centres

Work on the building of the first of several remand centres (centres to which a court may send young persons between the ages of 17 and 21 who would otherwise be remanded to prison, and those under 17 years old who are unsuitable for remand homes) was due to begin during 1959.

Attendance Centres

Thirty-seven attendance centres have been established in England and Wales to deal with boys between the ages of 12 and 17 found guilty of offences for which an adult can be sentenced to imprisonment. This form of treatment is designed to teach young offenders a respect for the law and to give them some instruction in the proper use of leisure. Boys ordered to attend must do so during their spare time on Saturday mornings or afternoons; they may be required to attend for up to three hours on any one occasion and for not more than twelve hours in all. The activities include a period of instruction in handicrafts, or a lecture (e.g., on first aid) and a period of physical training or disciplinary tasks under supervision. Efforts are made at the centres to induce the boys to join a youth club or other suitable organisation.

An experimental centre for youths aged 17 to 21 has recently been established in Manchester. This operates on similar lines to those adopted at the juvenile centres, but the activities have been adapted to meet the needs of the older age group.

Detention Centres

Detention centres are designed to provide a short, sharp shock for those who have not yet developed a definitely anti-social attitude, but who need to be taught that the law cannot be defied with impunity. The offender is normally sent to the centre for three months, though in certain circumstances the courts have power to commit for a shorter or longer term up to a maximum of six months. The régime is designed to deprive the boy of his liberty and of all the elements of what he thinks of as a 'good time', and to oblige him to live a brisk, disciplined life, maintaining the highest possible standards at the highest possible tempo. Each boy in a detention centre must be alert, punctual and tidy, and emphasis is placed on the inculcation of obedience, cleanliness and good manners. The routine provides a normal working week of 44 hours, including one hour daily devoted to physical training. Boys of compulsory school age receive full-time education, and classes of further education are provided for others in the evenings. In 1959, there were four detention centres in England and Wales—two junior centres for boys over 14 and under 17 years of age, accommodating about 70 and 60 boys respectively, and two senior centres for youths over 17 and under 21 years of age, accommodating about 75 and 65 respectively.

Borstal Institutions

There are various types of borstal institution, which aim to provide suitable conditions and training courses for different types of young offenders between the ages of 16 and 21 years. For youths in England and Wales, there are two borstal allocation centres, 19 training borstals, one correction centre and one recall centre; and there are three training borstals and one recall centre for girls. In Scotland, there are four borstals for youths and one for girls; and in Northern Ireland, one for youths and one for girls. The period of the sentence ranges between a minimum of nine months detention to a maximum of three years, with the total period of control extending to four years (three years in Scotland and Northern Ireland), divided between training in a borstal institution and controlled freedom under statutory supervision. In Scotland, the supervision period is for one year from the date of release from the institution or until the expiration of three years from the date of sentence, whichever is the shorter. The system is essentially remedial and educational, based on personal training by a carefully selected staff. Emphasis is placed on vocational training in skilled trades; there is much freedom of movement, and many borstals are conducted in open conditions. An initial

period of classification ensures that each young offender is sent to the institution best suited to his or her requirements.

Probation

The probation service¹ is designed to secure the rehabilitation of an offender while he remains at work or at school under the supervision of a probation officer, whose duty it is to advise, assist and befriend him. A cardinal feature of the service is that it relies on the co-operation of the offender. Before making a probation order, the court must explain its effects and make sure that the probationer understands that if he fails to comply with the requirements of the order he will be liable to be dealt with for the original offence. A probation order cannot be made without the consent of the person concerned unless (in England, Wales, and Northern Ireland only) he is under 14 years of age. The order usually requires the probationer to keep in regular touch with the probation officer, to be of good behaviour and to lead an industrious life. It may also require him to live in a specified place, or to submit to treatment for his mental condition. A probation order is made for not less than one year and not more than three years.

Every magistrates' court and superior criminal court must have available the services of probation officers of both sexes. In 1959, the total numbers were: 1,407 whole-time and 54 part-time probation officers in England and Wales, 16 whole-time and one part-time in Northern Ireland, and 130 whole-time and 35 part-time in Scotland. In London, the appointment of probation officers is the responsibility of the Home Secretary, and in Northern Ireland of the Ministry of Home Affairs; elsewhere it is the responsibility of probation committees appointed by magistrates in England and Wales, and by local authorities in Scotland (except for certain *ex officio* members), but all appointments are subject to confirmation by the Home Secretary and the Secretary of State for Scotland respectively. Training facilities in England and Wales are provided by the Home Office on the advice of the Probation Advisory and Training Board and are made available, by arrangement, to Northern Ireland officers. In Scotland, training is provided during the first year of appointment and before the officer is allowed to make probation work his permanent career.

THE POLICE SERVICE

The police service of Great Britain is organised and controlled on a local basis under the guidance of those Ministers of the Crown who are responsible for the maintenance of law and order in their respective countries. In England and Wales, the responsible minister is the Home Secretary; in Scotland, the Secretary of State for Scotland. In Northern Ireland, the police force is controlled by an Inspector-General, who is responsible to the Minister of Home Affairs.

POLICE IN GREAT BRITAIN

Police Forces

There are 125 separate, independent police forces in England and Wales, defined according to area of responsibility as county forces; borough forces; combined forces, which are forces whose area of responsibility extends over neighbouring counties or boroughs; the metropolitan police force, which is responsible for an

¹ A departmental committee to inquire into and make recommendations on all aspects of the probation service was appointed in May 1959.

area of approximately fifteen miles radius from Charing Cross, but excluding the City of London; and the City of London force. In Scotland, there are 33 forces, including county forces, burgh forces and combined forces.

In England and Wales and Scotland, police forces vary considerably in size according to the area and population which they serve. Thus, in 1959, the metropolitan police force had a strength of approximately 17,000, while that of the smallest force in Scotland was 16.

The strength of the regular police force in Great Britain in 1959 was approximately 80,000, including women.

In addition to the regular police forces, there are part-time special constables; the police of certain public services, e.g., the British Transport Commission police, the civil aviation constabulary, the Port of London Authority police and other dock and harbour forces (who have duties and powers analogous to those of ordinary constables but limited to the premises and immediate neighbourhoods of their employers); and the police of the Service departments—the Admiralty constabulary, the War Department constabulary which guards War Office lands and military property, the Royal Marine police who are employed chiefly in dockyards, and the Air Ministry constabulary.

Police Authorities

In the counties of England and Wales, the police authority is the standing joint committee, half of whose members are members of the county council while the other half are justices of the peace. In the boroughs, the police authority is known as the 'watch committee' and is elected by the council from among its members. The police authority of a combined force is made up of representatives of the constituent areas as prescribed in the scheme under which they combine.

The police authority for the metropolitan police force is the Home Secretary. In the City of London, the Common Council is the police authority, although it usually appoints a standing committee to deal with all police matters on its behalf.

In Scotland, the police authority for the counties is the county or joint county council; in the large burghs it is the town council; where there are combined forces there is a joint police committee.

It is the statutory duty of the police authorities to establish and maintain efficient police forces for their areas. They are responsible for the appointment of the chief officer of police in their areas, subject to the approval of the Home Secretary in the provinces of England and Wales, of the Crown in the City of London, and, in Scotland, of the Secretary of State. In the metropolitan police district, the chief officer of police and his immediate subordinates are appointed by the Crown on the recommendation of the Home Secretary.

The police authorities are also responsible (with the approval of the Home Secretary or the Secretary of State for Scotland) for the size and disposition of their forces; for paying the members of the forces their prescribed emoluments; for providing and maintaining police premises; and for exercising disciplinary functions in relation to the most senior officers.

Central Authority

Co-ordination in the administration of the police service is exercised through detailed police regulations which are issued by the Home Secretary and the Secretary of State for Scotland under the Police Act, 1919, and the Police (Scotland) Act, 1956. The police regulations cover such matters as organisation, discipline, pay, allowances, pensions, clothing, and conditions of service of the members of all police forces to which the Acts apply.

The Police Council for Great Britain, a negotiating body established in 1953 (which is representative on the one side of all ranks of the police service and on the other of the local police authorities, the Home Office and the Scottish Home Department), has power to reach agreement on conditions of service in the police forces and on certain procedural matters. It also advises the ministers on police pensions and any other matter which may be referred to it by the ministers or any other body concerned. In their supervisory responsibilities, the ministers are assisted by Her Majesty's Inspectors of Constabulary, of whom there were five (in addition to a woman assistant inspector for the women police) in England and Wales, and one in Scotland in 1959. Each inspector is responsible for a certain number of forces, and satisfies himself of their continuing efficiency by annual inspections, *ad hoc* visits and consultations when particular problems arise. The inspectors report to the ministers on the condition of all the forces, with the exception of the metropolitan police force, for which the Home Secretary has a direct responsibility and which is not inspected.

All police authorities receive a Government grant equal to half their net expenditure reckoned in accordance with the provisions of orders made under the Miscellaneous Financial Provisions Act, 1950 (as regards England and Wales), and the Police (Scotland) Act, 1946 (as regards Scotland). These orders empower the Home Secretary and the Secretary of State for Scotland to withhold the grant, in whole or in part, permanently or for such time as they may determine, if they are not satisfied that a police area is efficiently policed, that a force is properly maintained and administered, or that the rates of pay or allowances are as prescribed or approved by them.

Police Officers

There are several different kinds of police officer in Great Britain: regular police officers who usually serve for 25 years or more and thereafter retire on pension; members of the first police reserve, which is composed almost entirely of police pensioners or men with previous police experience who are prepared to give whole-time paid service to a particular force in an emergency, whether national or local; and special constables, who are volunteers who perform short periods of duty without pay in their spare time from their normal occupations.¹

In general, entry to the regular police force is open to men between the ages of 19 and 30, although an exception may be made, in special circumstances approved by the ministers and on the recommendation of the appointing authority, in the case of men of over 30 years of age. Women entrants in England and Wales must be between the ages of 20 and 35, and in Scotland between 20 and 30 years old. The standard police ranks in Great Britain, except in the metropolitan police district, are: chief constable, superintendent, inspector, sergeant and constable. The following ranks may also be adopted in areas where varying degrees of responsibility make intermediate ranks necessary: assistant chief constable, chief superintendent, chief inspector and, in England and Wales only, station inspector, station sergeant and acting sergeant. In the metropolitan police district the chief officer is the Commissioner of Police of the Metropolis. He is assisted by a deputy commissioner and four assistant commissioners. Next in rank are commanders, then deputy commanders; thereafter (i.e. from chief superintendent downwards) the ranks are the same as in the rest of the country. In the City of London the ranks are the same as in the provinces, except that the chief officer is the Commissioner of Police and the second in command is an assistant commissioner.

¹ In Scotland, the employment of special constables, other than in emergencies, is subject to strict limitations.

No member of the police service may belong to a trade union, since it is a basic principle of the service that its members must not only be free from political bias, but must also be seen to be free of it. The Police Act, 1919, however, laid it down that the police should have statutory representative organisations of their own. There are now several organisations representing the various police ranks, including the Police Federation in England and Wales and the Scottish Police Federation, to which all inspectors, sergeants and constables belong. Any branch or committee of the federations may make representations to the chief officer or police authority concerned, or to the appropriate minister. Delegates from the joint central committees of the two federations sit on the police councils.

Police Cadets

Police cadets are recruited by most forces from among youths between 15 and 18 years of age, so that prospective constables shall have had some training and have gained sufficient insight into police duties to make reasonably certain that they wish to stay in the police service before they undergo constable's training. A few forces also recruit girl cadets.

Civil Staff

A number of police authorities employ civilians to perform certain duties ancillary to police functions, e.g., as shorthand-typists, switchboard operators, mechanics, canteen staff and cleaners, in order to release uniformed personnel for police duties. In 1959, the civil staff employed by the police authorities in England and Wales (outside the metropolitan district) was 10.7 per cent of the actual strength of the uniformed force.

Police Duties

Every police officer in Great Britain is an independent holder of a public office. His powers as a constable, whether conferred by statute or by common law, are exercised by him by virtue of his office and cannot be exercised on the responsibility of any person but himself. Thus, unless acting in pursuance of a magistrate's warrant, a police officer is liable for any wrongful or mistaken action on his part, for he is not the servant of the police authority, and in discharging his duties must rely on his own discretion and his own knowledge of the law.

The many and varied functions of a police officer as a constable range from the protection of persons and property, road or street patrolling and traffic control to criminal investigation, arresting persons committing offences or, in certain cases, under suspicion of acting in an unlawful way, and, in England and Wales, preparing and presenting straightforward cases in magistrates' courts.

All police forces have their own criminal investigation departments, and many have other specialised departments, including motor patrols, river police (in districts which include long stretches of navigable waterway), a mounted branch (for maintaining order and safety in large crowds), and police dogs.

Centrally Run Services

During recent years a number of common services have been established to supplement those provided by the police authorities for their own use. In England and Wales, such services include a training service, which provides eight residential district training centres and a central police college; an installation and maintenance service of wireless equipment for the police; a forensic service, which provides laboratories for the use of regional groups of forces; and arrangements for conducting centralised police promotion examinations. In Scotland, there is a

central police college, which provides training courses for recruits and courses of higher training; but the installation and maintenance of wireless equipment is a direct charge upon the police authorities concerned and there is no centrally run forensic science service. The resources of the Glasgow police force's criminal investigation department (which includes a finger-print bureau and an extensive laboratory service) are, however, made available to other forces, and the universities of Aberdeen, Edinburgh, Glasgow and St. Andrews render assistance when required.

A number of national services are provided by the metropolitan police force, whose functions in this respect include: (1) the maintenance of criminal records and finger-prints, which are available to all police forces of the United Kingdom and to certain foreign forces; (2) the publication of the *Police Gazette*,¹ which contains particulars of people wanted for crime and details of stolen property, and is supplied without charge to the police forces of the United Kingdom and to certain other Commonwealth and foreign forces; (3) the organisation and control of the special branch of the criminal investigation department at New Scotland Yard, whose duties include the physical protection of royalty, some ministers, and distinguished foreign visitors; and (4) the carrying out of extradition orders made by the courts. The metropolitan police force is also the agent in the United Kingdom of the International Police Commission (Interpol). For certain of these services, the metropolitan police force receives an additional Exchequer grant.

POLICE IN NORTHERN IRELAND

The Royal Ulster Constabulary comes under the direction of the Inspector General, who is responsible to the Minister of Home Affairs. It undertakes the policing of the whole of Northern Ireland, its cost being borne by the Northern Ireland Exchequer with a nominal contribution from the county borough of Belfast.

The strength of the Royal Ulster Constabulary in 1959 was approximately 2,890, including women. The Inspector General has, under his immediate command, a deputy inspector general, a commissioner for the City of Belfast, and a county inspector for each of the six counties. The area is further sub-divided into districts, each district coming under a district inspector and each sub-district under a head constable or a sergeant. Conditions of service and pay follow closely on the lines of the police service in Great Britain, and the general duties pertaining to the various ranks are much the same. Although the more senior ranks bear different titles, the ranks of head constable, sergeant and constable are broadly equivalent to the three junior ranks in the Great Britain police service.

The Ulster Special Constabulary also comes under the direction of the Inspector General. In the main, this force is a part-time body, and, apart from training, its duties consist in affording assistance to the Royal Ulster Constabulary on special occasions; if necessary, however, its part-time personnel may be mobilised for full-time duty. In 1959, the Ulster Special Constabulary included 13,800 part-time members, of whom 1,570 were mobilised, and 100 full-time personnel.

THE FIRE SERVICE

The fire services in Great Britain are organised on a local basis, subject to a measure of central control exercised by the Home Secretary (in England and Wales) and the Secretary of State for Scotland. The fire services in Northern Ireland are

¹ A Scottish *Police Gazette* is published by the City of Glasgow Police Force.

controlled by two authorities, the Belfast Corporation and the Northern Ireland Fire Authority, which are responsible to the Minister of Home Affairs. Every part of the United Kingdom is covered by a public fire brigade.

FIRE SERVICES IN GREAT BRITAIN

In 1959, there were 135 local authority fire brigades in England and Wales and 11 in Scotland.

Fire Authorities

The responsibility for fire-fighting functions, which was vested in the two ministers on a national basis as an emergency measure during the second world war, was restored in 1948 to local government control under the Fire Services Act, 1947. The effect of the Act was to transform the National Fire Service (established in 1941) into separate fire brigades administered, in England and Wales, by the county or county borough councils, which were created the fire authorities for their areas and were given powers and duties which they exercise either separately or as combined authorities where neighbouring councils care to make such arrangements to increase the efficiency of the service. The London County Council is in direct control of the London Fire Brigade, which serves all London, including the City of London. In Scotland, the local authorities are grouped in eleven areas each with a single brigade; with the exception of Glasgow, where the town council of the city is the responsible authority, each area is administered by a joint committee representative of the councils of the counties and large burghs in the area.

Central Control

The Home Secretary and the Secretary of State for Scotland are empowered to make regulations prescribing such matters as the maintenance of discipline, qualifications for appointment, promotion, and pensions in the local fire brigades. In matters affecting the fire brigades as a whole (excluding discipline and similar matters), each minister is advised by the appropriate Central Fire Brigades Advisory Council, consisting of representatives of the local authority associations, representatives of the chief officers (firemasters in Scotland) and other members of the brigades, and other persons having special qualifications for the purpose. The advisory councils are not concerned with the conditions of service of members of the brigades. On these subjects the ministers are advised by the National Joint Council for Local Authorities' Fire Brigades in Great Britain and the National Joint Council for Chief Officers of Local Authorities' Fire Brigades in Great Britain.

Central control is also exercised through the inspectors of fire services, whose duties include advising the ministers on technical matters. In 1959, there were 12 inspectors and assistant inspectors and one woman staff officer in England and Wales, and one inspector and one assistant inspector in Scotland.

Establishment Schemes

Each fire authority is required to draw up a scheme showing the establishment of officers and other ranks (both whole-time and part-time), the number and location of fire stations and the number and type of vehicles and appliances considered necessary for the provision of an all-over cover of its area. While details of establishment schemes (which must have ministerial approval) vary considerably according to the fire risks in the area concerned, there are, in the whole of England

and Wales, approximately 19,500 whole-time and 14,250 part-time firemen, operating almost 4,000 fire-fighting appliances (including pumps, turntable ladders, water tenders, and emergency and salvage tenders) housed in some 1,600 fire stations. In Scotland, there are approximately 2,000 whole-time and 2,600 part-time firemen, 600 fire-fighting appliances, and 320 fire stations.

It is the duty of each fire authority to purchase such vehicles and equipment as are required under the establishment scheme. Equipment is standardised, and appliances are bought by fire authorities to requirement specifications, which ensure that essential standards are maintained and yet allow sufficient freedom of design to meet local requirements.

Operational Methods

Each fire authority is required to appoint a chief officer (firemaster in Scotland) to be the chief administrative and executive officer for the fire services in its area. The appointment must be ratified by the Home Secretary or by the Secretary of State for Scotland. The chief officer or firemaster is responsible to the fire authority for seeing that both the fire brigade and the fire department (which is the administrative centre and staff headquarters for the fire brigade) are organised and managed in accordance with policy laid down.

There is a central headquarters for operational control, which is exercised on a local basis by divisional officers in charge of geographical divisions into which most areas are divided for the purpose. Each divisional officer has at his disposal a small staff of whole-time, and a varying number of part-time, officers and men; and he is responsible for mobilising this force in the strength necessary for dealing with any outbreaks of fire in his division. Constant communication is maintained between divisional and brigade headquarters; and if at any time an outbreak of fire should grow beyond the capabilities of a divisional force, help is sent from one or more neighbouring divisions in its area, or even from the area of another fire authority. Under arrangements for mutual help made by all fire authorities, the nearest available force is sent to the scene of a fire, regardless of area boundaries.

In England and Wales, the average number of fire calls a year totals about 158,000, including those for chimney fires. In addition, there is an annual average of 22,000 special service calls for such purposes as rescuing persons and animals trapped in dangerous situations, dealing with crashed aircraft, and pumping and salvage operations. During the past ten years, some 2,500 lives have been saved through fire service operations. In Scotland, the average number of fire calls a year, including those for chimney fires, is 21,118; the average number of special services is 918, and the number of persons rescued through fire service operations during the past ten years was 1,056.

Firemen

Firemen in Great Britain include: whole-time firemen; part-time firemen—either 'retained' firemen, who undertake, in return for a small retaining fee, to attend fires if they are called upon to do so, or 'volunteer' firemen, who receive no remuneration; auxiliary firemen, who are enrolled as part of the local authority civil defence organisation as members of individual brigades under the command of chief officers or firemasters, and whose activities are restricted (except in a war emergency) to such duties as are desirable for training; and members of fire-fighting organisations with specialised functions, which are outside the scope of the 1947 Act, e.g., those maintained by the War Office, the Air Ministry, the Ministry of Transport and Civil Aviation and by some of the more important industrial and commercial concerns.

Ranks in the fire services (for men) are chief officer, assistant chief officer (fire-master and assistant firemaster in Scotland), divisional officer, assistant divisional officer, station officer, sub-officer, leading fireman and fireman. Ranks in the women's branch, which is mainly concerned with controls, administrative duties and duties of a clerical nature, are (for Great Britain as a whole) group officer, assistant group officer, senior leading firewoman, leading firewoman, and firewoman. Promotion in the lower ranks of the fire-fighting forces is by examination and by merit, and in the higher ranks by merit only.

Recruits and junior ranks in the fire service in England and Wales receive practical training and theoretical instruction in a number of subjects, including physics, chemistry, hydraulics, building construction, industrial processes, and the law, at training schools run by fire authorities and refresher courses arranged by fire departments. In Scotland, similar training is carried out at a central training school which is the responsibility of the Scottish Home Department. Courses for officers and potential officers of fire authority brigades are held at the Fire Service College, at Wotton House, near Dorking, Surrey, which is maintained by the Home Office and the Scottish Home Department as the central training institution for the fire services. The college also provides intensive courses for fire prevention officers.

Finance

Every fire authority is required to submit to the Home Secretary or to the Secretary of State for Scotland an annual statement showing its expenditure and income in connection with the provision of fire services during the preceding year; the local authorities bear the cost of maintaining the services, the Exchequer contribution being included in the general grant.

Research

Research into all aspects of fire prevention and fire-fighting is directed mainly by the Joint Fire Research Organisation; the cost of its work is shared equally between the Government and the Fire Offices' Committee (a committee of the insurance companies dealing in fire risks). The organisation controls a fire research station at which practical tests are carried out.

FIRE SERVICES IN NORTHERN IRELAND

In Northern Ireland, the Belfast Corporation controls the Belfast Fire Brigade and is responsible for the area inside the city boundary, and the Northern Ireland Fire Authority covers the rest of the country outside Belfast.

The Belfast Fire Brigade maintains five whole-time stations and has an establishment of 190 officers and men manning 13 appliances, while the Northern Ireland Fire Authority has one whole-time station in Londonderry and 44 other stations throughout the remainder of the area, and an establishment of 90 whole-time officers and men and 650 part-time firemen, manning 69 appliances.

Ranks of Firemen

The ranks of firemen in Northern Ireland are: for the Northern Ireland Fire Authority—fire force commander, divisional officer, assistant divisional officer, senior company officer, company officer, section leader (retained brigades only), leading fireman and fireman; and for the Belfast Fire Brigade—chief officer, deputy chief officer, divisional officer, assistant divisional officer, station officer, sub-officer, leading fireman and fireman.

Finance

The Fire Services Acts (Northern Ireland), 1947-56, under which the fire authorities were established, provided that the amount of fire service grant payable to the Northern Ireland Fire Authority should be 50 per cent of the loan charges in respect of capital expenditure which did not exceed £60,000, and 25 per cent of the amount (if any) by which the loan charges exceeded £60,000, together with 50 per cent of the first £150,000 of other net expenditure and 25 per cent of the excess over that amount. Expenditure in excess of the fire service grant is apportioned among the local authorities liable to contribute to the funds of the authority. Under the Fire Services Acts, the Belfast Fire Brigade cannot qualify for the payment of fire service grant.

III. DEFENCE

THE DEFENCE SYSTEM

An adequate general survey of the principles which govern United Kingdom defence policy is possible only in the wider context of the United Kingdom's international relationships, its place in the Commonwealth and in world affairs, and its responsibilities towards British dependent and protected territories—subjects which, as explained in the Introduction, fall outside the scope of this handbook. This chapter, therefore, can attempt little more than an outline of the present pattern of the development of Britain's armed forces.

DEFENCE POLICY

The national defence policy has been increasingly based on the realisation that no country can protect itself in isolation and the defence of Britain is possible only as part of a system of collective defence. Policy is therefore determined largely by Britain's obligations to contribute to the collective defence organisations of which it is a member—the North Atlantic Treaty Organisation (NATO) and Western European Union, the Central Treaty Organisation (CENTO, formerly the Baghdad Pact), and the SEATO defence system in South-East Asia—as well as to discharge its own special responsibilities in many parts of the world; and defence planning is carried out in close co-operation with Britain's partners in these organisations.

Close liaison is maintained with other Commonwealth countries, between whose forces there is considerable standardisation of equipment, weapons and training techniques and interchange of personnel.

At the same time the United Kingdom continues to work for the attainment of international agreement on the control of all forms of armaments.

Machinery of Higher Defence Planning

The Queen is titular head of all the armed forces. Supreme responsibility for national defence rests, under the ultimate control of Parliament (which makes annual financial provision for defence needs), with the Prime Minister and the Cabinet. Subject to this supreme responsibility, defence problems which engage the collective responsibility of the Cabinet are normally handled on the Cabinet's behalf by the Defence Committee, meeting under the chairmanship of the Prime Minister. The Prime Minister determines which members of the Defence Committee should attend particular meetings of the committee, according to the subjects to be discussed and the ministerial responsibilities involved. The Minister of Defence, who is a member of the Cabinet and of the Defence Committee, answers to Parliament for all matters of policy common to the three fighting Services—the Royal Navy, the Army and the Royal Air Force. The minister has authority to decide (subject to the responsibilities of the Cabinet and the Defence Committee) all major matters of defence policy affecting the size, shape, organisation and disposition of the armed forces, and their weapons and war-like equipment and supply (including defence research and development). He is also ministerially responsible to the Prime Minister for the execution of military operations approved

by the Cabinet or the Defence Committee. Recommendations for the more important Service appointments are submitted by the Service ministers (the First Lord of the Admiralty, the Secretary of State for War, who deals with the Army, and the Secretary of State for Air) and the Minister of Supply for the approval of the Minister of Defence, who, in appropriate cases, seeks the covering approval of the Prime Minister.

The Service ministers, working through the Board of Admiralty and the Army and Air Councils, are responsible for the efficiency and administration of the three Services. The Minister of Supply, similarly, is responsible for the efficient execution of approved programmes of defence research development and production. All these ministers are members of the Defence Committee, while consultation on defence policy between them and the Minister of Defence and discussion of inter-Service problems take place at meetings of the Defence Board, of which the Minister of Defence is chairman.

The Chiefs of Staff Committee, which comprises the Chief of the Defence Staff (who is principal military adviser to the Minister of Defence) as chairman and the professional heads of the three Services, is collectively responsible to the Government for professional advice on strategy and military operations and on the military implications of defence policy generally. Its collective advice is given to the Minister of Defence by the Chief of the Defence Staff, who tenders his own advice, together with the views of the other members of the committee, if the committee cannot reach agreement. The Chief of the Defence Staff is responsible for issuing operational orders, and he is entitled to call on the respective Chiefs of Staff to make available, to assist him in his functions, the services of the Naval, General and Air Staffs. The Chiefs of Staff are members of the Defence Board, are in attendance at meetings of the Defence Committee and may be invited to attend meetings of the full Cabinet as necessary; they have at all times a right of access to the Minister of Defence and, when necessary, to the Prime Minister.

Britain's defence policy is reviewed each year in a White Paper presented to Parliament by the Minister of Defence immediately before the detailed Estimates of the Service departments.

The White Paper for 1957—*Defence: Outline of Future Policy, Cmnd. 124*—set out a five-year plan for the reshaping of the defence forces in the light of changes in the international situation, the rapid progress in military technology, and the need to relieve the burden which defence requirements had been imposing on the country's financial and economic strength. This programme, described as involving 'the biggest change in military policy ever made in normal times' is now being put into effect, and progress during the first two years was reviewed in the White Papers of 1958 (*Cmnd. 363*) and 1959 (*Cmnd. 662*).

The Long-term Plan

Britain's armed forces, the 1957 White Paper stated, must be able to perform two main tasks:

- (1) 'to play their part with the forces of allied countries in deterring and resisting aggression; and
- (2) 'to defend British colonies and protected territories against local attack, and undertake limited operations in overseas emergencies.

'The aim must be to provide well-equipped forces sufficient to carry out these duties, while making no greater demands than are absolutely necessary upon manpower, money, and other national resources.'

The new plan provides for smaller, highly trained, all-regular forces with increased mobility, equipped with the most modern weapons and organised on up-to-date lines. A central strategic reserve will be maintained together with the means of transport, including airlift, to take it rapidly to the scene of any trouble. Since 'the over-riding principle must be to prevent war rather than prepare for it', priority is given to the production of the deterrent—nuclear weapons and the means to deliver them—though it is emphasised that conventional forces armed with conventional weapons will still be essential.

The intention is that there should be no further call-up of men for National Service after the end of 1960 and that by the end of 1962 the armed forces should be composed wholly of regulars. The plan involved a reduction of about 300,000 in the combined strength of the three Services, which stood at nearly 700,000 (adult United Kingdom males) in 1957. By 1st April, 1959, half this planned reduction had been completed. The rate of run-down in later years will depend on the international situation and the requirements of the regional defence organisations of which Britain is a member.

DEFENCE AND THE ECONOMY

After the end of the second world war the strength of the armed forces had been drastically reduced. It was not until growing world tension made it inevitable that this trend was first halted and then reversed. Following the outbreak of war in Korea in 1950, the United Kingdom embarked on a programme for building up its defence forces, at a cost estimated originally at £4,700 million over a three-year period.

Between 1950 and 1953 annual defence expenditure was nearly doubled, rising to some £1,400 million in 1952–53, and over the same period the total strength of the active forces increased from just under 700,000 to a peak of about 875,000 at the beginning of 1953. With the end of hostilities in Korea, the programme was revised to meet the changed conditions and to keep it within the limits of the country's economic resources in the face of rising costs. In place of a short rearmament spurt there was substituted the policy of the 'long haul'; the programme was slowed down and spread over a longer period.

Nevertheless, the burden on the economy continued heavy. In 1953, defence absorbed about 11 per cent of Britain's gross national product, compared with 7 per cent in 1950. In 1956, some 7 per cent of the working population was either in the Services or supporting them, and one-eighth of the output of the metal-using industries—vital to the economy as a main source of exports—was devoted to defence. The very heavy cost of maintaining large British forces abroad (which in 1956 involved expenditure of some £179 million in foreign currency) placed a severe strain on the balance of payments. The total net defence budget of nearly £1,500 million in 1956–57 (after allowing for receipts from United States aid under the Mutual Security Programme and German contributions to the cost of British forces stationed in Germany as part of the NATO forces) equalled more than one-third of total central Government current ordinary expenditure.

The effects on the economy of the new defence policy announced in 1957 are now making themselves felt. The proportion of the working population in the Services or supporting them is falling (it is now estimated at just over five per cent), the claims on the metal-using industries are being appreciably reduced (about one-ninth of the output of these industries is at present being devoted to defence), and the call on scientific and engineering skills is easing. Because of the increasing complexity of modern weapons and equipment and the higher cost

per man of regular forces, defence expenditure cannot show a reduction proportionate to that in manpower. In the face of rising costs and improvements in Service pay, allowances and conditions, defence expenditure has been held at the 1956-57 level (and in 1958-59 represented about 8 per cent of the gross national product). It still, however, accounts for about a quarter of total central Government ordinary expenditure.

Current Defence Budget

The gross defence Estimates for 1959-60 totalled £1,514 million. After deducting the contribution from the Federal German Government in respect of local costs of British forces in Germany,¹ the Estimate presented to Parliament for 1959-60 was £1,502 million.

The allocation of finance between the various Services is shown in Table 5.

TABLE 5
DEFENCE ESTIMATES, 1959-60

<i>£ million</i>							<i>Gross Total</i>	<i>After deducting receipts from Germany</i>
Admiralty	..	..	..	..	..	..	370.70	370.70
War Office	..	..	..	..	..	..	441.35	431.35
Air Ministry	..	..	..	..	..	..	492.80	490.80
Ministry of Supply	..	..	..	..	..	..	191.80	191.80
Ministry of Defence	..	..	..	..	..	..	17.48	17.48
							1,514.13	1,502.13

The Ministry of Defence Estimate consists mainly of contributions to international defence organisations, largely to the NATO common infrastructure programmes.²

Defence expenditure by civil Departments in 1959-60 (including loan expenditure by the Post Office) was estimated at £18.48 million.

MANPOWER

Each of the three fighting Services is at present made up of a combination of voluntary recruited regulars and men called up for National Service, and each includes a corps of women volunteers who form part of the regular forces. An analysis of the strength of the forces in April 1959, with estimates for 1960, is given in Table 6.

¹ Under an agreement announced in May 1958, the Federal German Republic is to pay £12 million annually for three years towards these costs.

² 'NATO common infrastructure' has been defined as capital investment in basic facilities, such as airfields, signals systems and headquarters, designed for common use. By March 1959, shared expenditure under the infrastructure programmes amounted to about £490 million and further programmes had been agreed for implementation by 1961 which, it was estimated, would bring the total to £928 million. The United Kingdom is contributing about £112 million towards the cost of the programmes.

TABLE 6
ACTIVE STRENGTH OF THE ARMED FORCES, 1959-60

Thousands

	1st April, 1959				1st April, 1960 (estimate)			
	Navy	Army	RAF	Total	Navy	Army	RAF	Total
Regular (male) ..	95.8	172.9	142.2	411.0	93.9	260.4	160.2	515.4
National Service Women (including nurses) ..	2.2	125.0	26.0	153.3	0.9			
	3.6	6.0	5.0	14.5	3.6	5.9	5.1	14.6
TOTALS ..	101.6	303.9	173.2	578.8	98.4	266.3	165.3	530.0

Note: (1) Figures are rounded to the nearest 100 and therefore do not add up exactly.

(2) Figures for the Navy include the Royal Marines.

(3) The estimated strength figures of the Army and RAF at 1st April, 1960, cannot as yet be divided between regulars and National Service men.

In addition, reserve and auxiliary forces with training liability (volunteers and part-time National Service men) totalled 589,300 at 1st April, 1959.

The planned figures (United Kingdom adult males) for the all-regular armed forces for 1962 are: Royal Navy, 88,000; Army, 165,000; Royal Air Force, 135,000. Arrangements for recruitment and training of regulars are summarised for each Service separately later in this chapter. Pay, pensions and allowances have recently been substantially increased and other steps are being taken to improve the conditions of Service life, including a five-year Service building programme, estimated to cost £90 million.

A Regular Forces Resettlement Service, set up by the Minister of Labour and National Service in 1957, assists regular officers and other ranks who are being retired or discharged prematurely owing to the manpower cuts to find civilian employment on leaving the forces (see also p. 399).

National Service

Compulsory military service in peace time was first introduced in Britain in 1939, shortly before the outbreak of the second world war. Under the National Service Acts, 1948-50, fit male British subjects between the ages of 18 and 26 ordinarily resident in Great Britain are (with certain limited exceptions) liable to serve for two years in one of the armed forces.¹ After this period of whole-time service they must serve for a period of 3½ years with one of the reserve forces, giving in all 5½ years of whole-time and part-time service. During the latter period they may be called upon to undergo up to 60 days' training in all, if required, but not more than 21 days in any year; with a few exceptions, this liability for part-time service is no longer enforced.

In October 1955, the Government announced its decision to reduce the size of the active forces (then nearly 800,000) by slowing down the rate of call-up for

¹ The upper age limit may be extended, under the National Service Act, 1955, in the case of men absent from Great Britain in the last year of their liability. The National Service Acts do not apply to men born after 1940.

National Service and allowing the general age of call-up to rise from 18 to 19 years. It was also stated that, in general, it would not be necessary to require National Service men (who have a maximum liability for 60 days' training during their 3½ years' part-time service) to do more than 20 days' training in all. In the spring of 1957, the decision was taken to plan on the basis that the reduced manpower required under the new defence plan would be obtained by voluntary recruitment and, subject to the fulfilment of this expectation, that there would be no further call-up for National Service after the end of 1960. The last National Service men will therefore be due to complete their whole-time service by the end of 1962.

During the run-down period not all men liable for National Service will be required, and the intake will be diminished by further slowing down the rate of call-up. It is intended to rely as far as possible on men in the age groups already called up who had been granted deferment to enable them to complete training or studies; they will be called up after completing their courses and will be supplemented by younger men, mainly those not eligible for deferment. It is now thought that sufficient men will become available from those born before October 1939 and the Government has announced that those born in or after that month need not expect to be called up.

Those men who may be granted deferment under the National Service Acts include, in addition to students and others undergoing training, men who are employed in certain occupations in the national interest, for as long as they are engaged in those occupations. This provision applies to men in certain coalmining occupations, merchant seamen, sea-going fishermen who are members of the Royal Naval Reserve (Patrol Service), some men employed in agriculture, crofters, some graduate teachers, some highly skilled scientists and engineers, a very small number of shale oil underground workers, and a limited number of police cadets.

Postponement of call-up may also be granted on the grounds of exceptional domestic, business or other hardship. Applications for postponement which are not granted by authorised officers of the Ministry of Labour and National Service are referred to independent local committees from whose decisions appeal may be granted to an umpire appointed by the Crown.

Men registering as conscientious objectors are subject to the decisions of local tribunals of impartial persons appointed by the Minister of Labour and National Service, with the right of appeal to an appellate tribunal.

Men called up under the National Service Acts have statutory rights to reinstatement in their former civil employment.

The Ministry of Labour and National Service calls up the men from civil life for registration and medical examination and posts them to the Services. The Army has been by far the biggest user of National Service men. In 1959, over forty per cent of the Army's active male strength was provided by National Service men as against about sixteen per cent of the Royal Air Force and just over two per cent of the Royal Navy.

Deployment Overseas

The deployment of United Kingdom forces is world-wide, in fulfilment of responsibilities under the regional defence organisations of which the United Kingdom is a member, and for the defence of United Kingdom dependencies. A considerable part of these forces is committed to NATO on the continent of Europe. Forces are also maintained in the Middle East, the Far East, East and North Africa, and the Caribbean.

Where appropriate, inter-Service commands are being established overseas. In April 1958, a single command was established for all United Kingdom land and air forces in the Arabian Peninsula, Persian Gulf and British Somaliland, together with the naval forces allotted to the Persian Gulf. A similar inter-Service command for the United Kingdom naval, army and air forces in the Mediterranean area is being set up as soon as practicable, and the possibility of setting up a unified command in the Far East is being examined.

Commissioned Ranks

The following are the main commissioned ranks in the three fighting Services; each rank is shown parallel to its equivalent in the other Services.

<i>Royal Navy</i>	<i>Army</i>	<i>Royal Air Force</i>
Admiral of the Fleet	Field-Marshal	Marshal of the RAF
Admiral	General	Air Chief Marshal
Vice-Admiral	Lieutenant-General	Air Marshal
Rear-Admiral	Major-General	Air Vice-Marshal
Commodore	Brigadier	Air Commodore
Captain	Colonel	Group Captain
Commander	Lieutenant-Colonel	Wing Commander
Lieutenant-Commander	Major	Squadron Leader
Lieutenant	Captain	Flight Lieutenant
Sub-Lieutenant	Lieutenant	Flying Officer
	Second Lieutenant	Pilot Officer

Staff Colleges

Selected officers of all three Services who have had previous staff training or have been to the Royal Naval Staff College, Greenwich (London), the Army Staff College at Camberley (Surrey), or the Royal Air Force Staff Colleges at Bracknell (Berkshire) and Andover (Hampshire), go to the Joint Services Staff College at Chesham (Buckinghamshire), where they live and work together and where particular attention is paid to the inter-Service aspects of staff work. This college caters for about 150 students a year from the Navy, Army and Air Force, the Civil Service, and other Commonwealth countries. Finally, there is the Imperial Defence College in London, to which are sent a few specially selected and more senior officers from the Services, the Civil Service, and from other Commonwealth countries.

SUPPLY OF WEAPONS AND EQUIPMENT

The Ministry of Supply is responsible for the procurement of all weapons and equipment used by the Army and the Royal Air Force. It is also responsible for the procurement for the Royal Navy of aircraft, some guns and ammunition, guided weapons and a certain amount of miscellaneous equipment. The Admiralty is responsible for the procurement of ships and associated equipment.

Production and Research

Production for the Services is carried out to a great extent by private industry on a contract basis, but also by the Royal Ordnance Factories, the Royal Dockyards and other establishments operated by the Ministry of Supply and the Admiralty. The Ministry of Supply's research establishments carry out research and development on behalf of the War Office and the Air Ministry, and also for certain aspects of Admiralty requirements, in particular naval aviation. Among the most important

of these establishments are: the Royal Aircraft Establishment, Farnborough; the Royal Radar Establishment, Malvern; the National Gas Turbine Establishment, Farnborough; the Guided Weapons Establishment at Aberporth, Cardiganshire; the Rocket Propulsion Establishment, Westcott, Buckinghamshire; the Aircraft and Armament Experimental Establishment, Boscombe Down, Wiltshire; the Armament Research and Development Establishment, Sevenoaks, Kent; and the Fighting Vehicles Research and Development Establishment, Chobham, Surrey. The Admiralty has its own research establishments, which carry out research on ships, maritime equipment and weapons (see p. 118) and also on certain kinds of electronic equipment on behalf of all three Services. Current production and development programmes are summarised later in this chapter in the sections dealing with the three Services individually.

Development and production of nuclear warheads to meet Service requirements are carried out by the Atomic Energy Authority (see pp. 212-3) under contract from the Ministry of Supply, which is responsible for the completed weapons. The Atomic Energy Authority is also co-operating with the Admiralty in research on the development of nuclear propulsion.

Service officers attend courses at the Atomic Energy Research Establishment, Harwell, and have also been attached to industrial firms manufacturing guided weapons during the development stage.

Guided missiles are tested at the Ministry of Supply's research establishments, and guided and ballistic missiles at the Woomera range set up in Australia under the Joint United Kingdom/Australia Guided Weapon Project. Service firing trials of air-to-air and surface-to-air missiles are carried out at Aberporth and at the Army gunnery range in Anglesey; a range for testing surface-to-surface missiles has been set up on South Uist in the Hebrides. There is close collaboration with the United States in the exchange of information and visits by technical personnel.

Some military equipment, including guided weapons, aircraft and radar equipment, is being supplied to Britain by the United States under the Mutual Security Programme. Part of this equipment is manufactured in the United Kingdom and financed by the United States under the 'off-shore procurement' programme. Under this programme the United Kingdom is also making equipment for other NATO countries in Europe. Wherever possible, weapons and other military equipment are standardised with NATO allies. The United Kingdom and the Federal Republic of Germany, for example, are co-operating in the development of tanks, light tracked vehicles and anti-tank weapons.

In addition to any orders for warships that may be placed from abroad with British yards, ships of the Royal Navy which have become surplus to United Kingdom requirements are made available to the Governments of other Commonwealth countries and to those of other friendly nations.

Nuclear Weapons

During the second world war, British research workers played an essential part in the allied project that led to the production of the first atomic bombs in the United States. After the war, the exchange of information on atomic weapons was for a time prohibited by an Act¹ of the United States Congress (later amended), and the United Kingdom therefore developed its own independently. The first test

¹ The Atomic Energy Act, 1946 (known as the McMahon Act), subsequently replaced by the Atomic Energy Act, 1954. Substantial relaxations were made by amending legislation passed in 1958, which permits, *inter alia*, the exchange, with friendly nations, of both nuclear and non-nuclear parts for weapons and military reactors and of information on nuclear weapon development.

explosion of a British atomic weapon was carried out in 1952 in the Monte Bello Islands off the north-west coast of Australia; further tests took place a year later near the Woomera rocket range in Central Australia, and early in 1954 it was announced that delivery of atomic weapons to the armed forces had begun. Further series of tests were held in 1956 and 1957, in the Monte Bello Islands and at the weapons proving ground at Maralinga in the South Australian desert. Britain now has a substantial and growing stockpile of kiloton¹ weapons.

In February 1955, the Government announced its intention to proceed with the development and production of thermonuclear weapons. The first test explosions were successfully carried out in May and June 1957 near Christmas Island in the central Pacific, and further tests were carried out in the same area later in 1957 and in 1958. The production of British megaton² weapons is now proceeding steadily. The 1958 tests and the exchange of information with the United States³ have enabled important technical advances to be made in the design of nuclear warheads which will permit a significant increase in the rate of production.

The chief means of delivering these weapons are at present the RAF's medium bombers of the V-class. The development is proceeding of propelled stand-off bombs which will greatly reduce the vulnerability of a bomber aircraft by enabling it to release its bombs a long distance from the target, outside the range of the missile defence system. In February 1958, the United Kingdom and United States Governments signed an agreement for the provision of launching sites in the United Kingdom for United States *Thor* intermediate-range ballistic missiles; these weapons would be used with nuclear warheads in time of war only with the agreement of both Governments. A British ballistic missile of a more advanced type, *Blue Streak*, designed for launching from underground, is being developed in close co-operation with the United States. Research is in progress into defensive measures against ballistic missiles and, in August 1958, it was announced that Britain had developed a device which could detect the launching of a ballistic missile over a distance of a thousand miles.

THE FIGHTING SERVICES

THE ROYAL NAVY

The Royal Navy is governed by the Board of Admiralty, which has four civilian and six naval members. The First Lord of the Admiralty is the minister responsible to Parliament for the Navy. The other civilian members of the Board of Admiralty are the Parliamentary and Financial Secretary and the Civil Lord, both of whom are ministers, and the Permanent Secretary, who is a civil servant and responsible for the general conduct of Admiralty business, including finance. The naval members are the First Sea Lord and Chief of Naval Staff; the Second Sea Lord and Chief of Naval Personnel; the Third Sea Lord and Controller of the Navy, whose responsibilities include ship construction and repair, research and the provision and repair of naval aircraft; the Fourth Sea Lord and Vice-Controller, responsible

¹ A kiloton weapon is equivalent to one thousand tons or more of high explosive.

² A weapon is said to be in the megaton range if it is equivalent to 500,000 tons or more of high explosive.

³ An Anglo-American agreement, signed in July 1958, made possible the exchange of information on the design and manufacture of nuclear weapons. This agreement was amended and supplemented by a further agreement, signed in May 1959, which contained provisions to enable the United Kingdom to buy from the United States component parts of atomic weapons and weapons systems, other than actual warheads, and to make possible the exchange of nuclear materials between the two countries.

for supplies and transport, maintenance and dockyard organisation; the Vice-Chief of Naval Staff, who assists the First Sea Lord; and the Deputy Chief of Naval Staff and Fifth Sea Lord, responsible for stating requirements for ships, aircraft and weapons and for laying down Admiralty policy on aircraft research and development.

The Shape of the Fleet

When rearmament started in 1950, the Admiralty gave particular attention to the need to build up anti-submarine and minesweeping forces, and to expand the Fleet Air Arm. The building of aircraft carriers and 'Daring' class destroyers already in hand was therefore pressed forward as quickly as possible, and a large programme of modernisation and conversion of ships and a much increased building programme were started.

The new defence plans, announced in 1957, envisage a Navy that is smaller than in the past but highly mobile. The carrier will continue to be the core of the new Navy. Grouped round the carriers will be supporting ships carrying the latest weapons for dealing with air, surface and underwater attacks and capable of acting by themselves on detached service. Apart from carriers, the number of large ships will be restricted to the minimum. Many ships in reserve, including battleships, are being disposed of.

The modern carriers have, or are being equipped with, the angled flight deck, the steam catapult, the automatic aircraft positioning device, and the mirror and 'Audio' landing aids (all British inventions), and an advanced type of radar equipment. A new carrier, *Hermes*, is expected to join the Fleet early in 1960, and will be equipped to carry the *Scimitar*, the *Sea Vixen* and the *NA.39* (when the latter comes into service) as well as anti-submarine helicopters. The reconstructed *Victorious*—one of the best equipped carriers in the world—joined the Fleet in 1958. In 1959, three front-line carriers—*Victorious*, *Centaur*, and *Albion*—were in the active Fleet; a fourth, *Eagle*, was being modernised; a fifth, *Ark Royal*, was refitting; and a sixth, *Bulwark*, was being converted into a commando carrier.

The first of the three 'Tiger' class cruisers, with fully automatic armament and the latest control equipment, was commissioned in March 1959. Construction of two of the four guided missile destroyers on order began early in 1959, and construction of a third began later in the year. Trials of the *Seaslug* missile, with which these ships will be equipped, have shown this to be a most effective weapon for the interception of attacking aircraft. The guided missile destroyers, in common with the majority of other ships, will also carry the shorter-range guided missile *Seacat* for close air defence.

In the five-year period from the beginning of 1956 to the end of 1960, 24 new anti-submarine frigates, 8 new anti-aircraft frigates and 13 new submarines will have joined the Fleet; in the same period, 3 anti-submarine frigates and 14 submarines will have been modernised. Three of the fast long-range submarines of the 'Porpoise' class had been commissioned by the spring of 1959, and by the end of 1960 eight of this class are expected to be in service.

One of the main purposes of the Reserve Fleet is to have ready, at short notice, ships to replace those in the Active Fleet which are damaged or withdrawn for refit or modernisation. Under the new defence policy the Reserve Fleet is to be smaller than in the past, but is being maintained at a higher state of readiness.

Afloat support to the Fleet for replenishment at sea, or in harbours or anchorages, is provided by the Royal Fleet Auxiliary Service, comprising tankers, store-issuing ships, tugs and salvage vessels. These ships fly the Blue Ensign and are manned by Merchant Navy officers and seamen.

Research and Development

Much experimental work has been carried out, with the Atomic Energy Authority, on *Dreadnought*, the Navy's first nuclear-propelled submarine. Construction work on *Dreadnought* was begun in June 1959 and a nuclear-propulsion unit has been purchased from the United States. Fundamental investigations are also in hand for the development of counter-measures against submarines with increased underwater speed. Research is proceeding with the aim of providing automatic means for handling tactical information in warships.

Research and development work to meet the Navy's modern requirements for weapons is now concentrated in two establishments. At Portsmouth (near Portsmouth), the design and development of ship-borne gunnery and guided missile systems is carried out. At Portland (Dorset), all aspects of work on underwater detection are co-ordinated with work on underwater weapons.

The close relationship between the United Kingdom and the United States of America is being continued, as well as collaboration with other members of the Commonwealth. Several valuable items of new equipment have been brought into service through the United States Mutual Weapons Development Programme and certain naval projects are being discussed with countries of the Western European Union.

Commands and Naval Dockyards

The Navy's main home commands are Portsmouth, Plymouth, The Nore, Scotland (Rosyth) and the Commander-in-Chief, Home Fleet. As one of the steps to be taken to ensure that available resources are used to the best advantage, it was announced in February 1958 that the Nore Command (based on Chatham) would be abolished and its functions transferred to other commands by April 1961. A major reorganisation of the Navy's dispositions overseas was also announced in the same month. In the North Atlantic and Mediterranean area, where command arrangements are integrated with the North Atlantic Treaty Organisation, United Kingdom naval forces are to be equipped predominantly for an anti-submarine role, and will consist of two aircraft carriers (with a third in reserve), two cruisers and a number of destroyers, frigates and submarines. In the Far East, the fleet (based on Singapore) will be an all-purpose force of one aircraft carrier, one commando carrier and one cruiser, together with destroyers, frigates and smaller vessels. Small naval forces continue to operate under the Commander-in-Chief, South Atlantic and South America Station, who, when not afloat, flies his flag near Cape Town (by agreement with the South African Government); the Senior Naval Officer, West Indies Station, who flies his pennant afloat; and the Senior Naval Officer, Persian Gulf, who, on the abolition of the East Indies Command in 1958, became Naval Deputy to the Commander, British Forces, Arabian Peninsula.

Naval shore support at home and overseas is also being reorganised in line with the changes in the operational fleet. The reductions include the closing of H.M. Dockyards at Hong Kong, Malta,¹ Sheerness and Portland and of five air stations in the United Kingdom. At home, the dockyards at Portsmouth, Devonport, Chatham and Rosyth will continue to provide the Navy with major supplies and repair facilities. Singapore and Gibraltar are the main dockyards overseas.

Fleet Air Arm

The Hawker *Sea Hawk* and the de Havilland *Sea Venom* provide the main day and all-weather fighter strengths of the Fleet Air Arm, but they are being succeeded

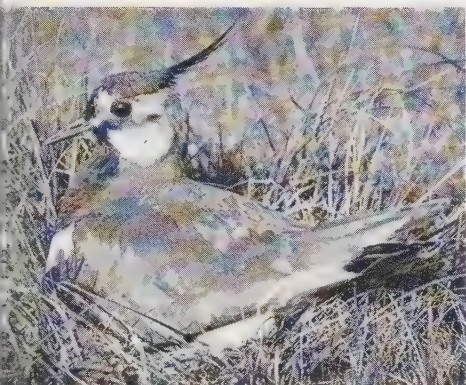
¹ The former naval dockyard at Malta was transferred in 1959 to a Maltese company set up by a South Wales ship-repairing firm.

SOME
BRITISH
BIRDS

Robin (*Erithacus
rubecula melophilus*)



Barn Owl (*Tyto alba*)



Lapwing (*Vanellus vanellus*)



Song Thrush (*Turdus ericetorum*)



Skylark (*Alauda arvensis*)



Chaffinch
(*Fringilla cœlebs*)

Gannets
(*Sula bassana*)





The cruiser HMS *Tiger*, commissioned 1959, has fully automatic armament and the latest control equipment.



One of the Royal Air Force's strategic jet bombers of the V-class, the *Victor B2*.



The *Saladin* armoured car, like much of the Army's new equipment, is transportable by air.



The *Blue Streak* ballistic missile in its transport and erector launcher tower at Hatfield (see p. 116)

HMS *Porpoise*, the first of the Royal Navy's new class of fast long-range submarines



respectively by the Supermarine *Scimitar*, which can carry an atomic bomb and which is fitted, owing to its high speed, with a 'flap-blowing' system to facilitate landing on carriers, and the de Havilland *Sea Vixen*, with armament which includes an air-to-air guided weapon, the *Firestreak*. The first front line squadron to be equipped with *Scimitars* embarked in the carrier *Victorious* in 1958 and the equipping of other squadrons with this aircraft is proceeding. The first squadron of *Sea Vixens* was commissioned in July 1959.

The anti-submarine turbo-prop Fairey *Gannet* has been in service since 1954 and is being replaced in that role by helicopters. A new strike aircraft, the Blackburn *NA.39*, is being developed to replace the *Wyvern*; it has a greater range and speed and is able to carry an atomic bomb.

British-built helicopters, the *Whirlwind* and the *Dragonfly*, are now in service with the Fleet Air Arm. A more powerful all-weather helicopter, the *Wessex*, has been ordered as a replacement for the *Whirlwind* and will become the Navy's main anti-submarine aircraft.

Royal Marines

The *Corps of Royal Marines* is a body of men trained for service on sea or land. Its official existence dates from 1664. The present-day functions of the corps are:

- (1) to provide personnel for the Commando Brigade;
- (2) to supply detachments for H.M. ships, which (a) man a proportion of the ships' armament, (b) provide emergency landing parties, and (c) carry out guard duties and the like; and
- (3) to provide crews for minor landing craft and certain other parties required for amphibious assault.

Women's Royal Naval Service

The *Women's Royal Naval Service* (WRNS) is an integral part of the Navy. Its members serve both at home and overseas. It has its own disciplinary code. Nursing services for the Navy are provided by *Queen Alexandra's Royal Naval Nursing Service* (QARNNS) and *Voluntary Aid Detachments* (VADs). The replacement of VADs by a new auxiliary section of the QARNNS began in September 1959.

Recruitment and Training for the Regular Navy

The main entry for naval officers is the cadet-entry. Cadetships on the General List are available to young men between the ages of approximately 17 and 19 years, and those selected, except electrical specialists, spend two years and four months at the Britannia Royal Naval College, Dartmouth, after which they join the Fleet as acting sub-lieutenants. Cadets chosen for electrical specialisation spend one year at Dartmouth and then read for an appropriate degree at a university at Admiralty expense. From the autumn of 1961 a new scheme of training will be introduced, whereby cadets of all specialisations will spend one year at Dartmouth on basic naval training and then spend a year at sea in the Fleet as midshipmen. They will then return to Dartmouth for academic training.

Short service commissions on the Supplementary List for aircrew duties with the Fleet Air Arm or in electrical specialisation are available to young men with appropriate qualifications. Doctors, dental surgeons and instructor officers all enter on short service commissions after completing their professional training, and permanent commissions are awarded to them according to the vacancies available. Ratings may qualify for a commission on the General List, on the Supplementary List for aircrew duties, and on the Special Duties List which has replaced the Branch List.

Commissions in the Royal Marines are gained through the same examination as are cadetships in the Royal Navy, and successful candidates are given a special training, part naval and part military, which lasts three years.

The age limits for entry as a rating in the Navy are as follows: seaman, engineering mechanic, electrical mechanic and naval air mechanic branches, 15 to 28 years; communications, naval airman and supply and secretariat branches, $16\frac{1}{4}$ to 28; artificer apprentices, 15 to $17\frac{1}{2}$; sick berth branch, $17\frac{1}{2}$ to 28; artificers (trained), $19\frac{1}{2}$ to 28 years. The initial engagement is for a period of 9 years over the age of 18 except for artificer apprentices, for whom it is 12 years over the age of 18. Age limits for entry into the ranks of the Royal Marines are: marines, 17 to 28 years; junior entry (general service duties), 16 to 17; boy buglers, 15 to $16\frac{1}{2}$; junior musicians, 14 to $17\frac{1}{2}$; musicians (trained), 17 to 28 years. Women may enter the Women's Royal Naval Service between the ages of $17\frac{1}{2}$ and 28 years for an initial period of 4 years; most WRNS officers are selected from serving ratings.

On entry, all naval and WRNS ratings and Royal Marines other ranks are given a basic training at the appropriate school or shore establishment and are given 'refresher' courses at regular intervals during their time in the Service.

Reserve and Auxiliary Forces

The *Royal Naval Reserve* (RNR) consists of volunteer reserves—serving at sea in the Merchant Navy or the fishing fleets or in civilian employment ashore—who carry out training in time of peace to meet the Navy's mobilisation requirements. Other reserves include the *Royal Fleet Reserve* (RFR), composed of men who have completed their service as regulars; the *Royal Naval Special Reserve* (RNSR), which includes most of the National Service men who are discharging their liability for part-time service; the *Royal Marine Forces Volunteer Reserve* (RMFVR); and the *Women's Royal Naval Reserve* (WRNR).

Royal Naval Minewatching Service

The Minewatching Service, a civilian organisation composed of men and women volunteers, is responsible in time of war for manning posts around the coast and overlooking the main navigable waterways. Its object would be to spot mines dropped from aircraft, and to plot and report their positions.

Sea Cadet Corps

The *Sea Cadet Corps*, which is administered by the Navy League in conjunction with the Admiralty, is the oldest pre-Service movement for boys in Britain; its origin dates from the time of the Crimean War in the mid-nineteenth century. Its aim is to give technical training to, and instil naval tradition in, boys under the age of 18 who intend to serve in the Royal and Merchant Navies and also to those sea-minded boys who do not intend to follow a sea career but will, given this knowledge, form a valuable reserve for the Navy. It also aims to provide for the social and educational welfare of the cadets and to develop character and good citizenship.

THE ARMY

The control of the Army is vested in the Army Council, of which the Secretary of State for War is president. The other civilian members of the Council are the Parliamentary Under-Secretary of State for War and Financial Secretary of the War Office (who is a minister and vice-president of the Council), and the Permanent Under-Secretary of State for War, a civil servant who acts as secretary to the Council. The five military members of the Army Council comprise the Chief of

the Imperial General Staff, who is assisted by the Vice-Chief of the Imperial General Staff, responsible for strategic policy and plans, operations and intelligence, and the Deputy Chief of the Imperial General Staff, responsible for war organisation, equipment, weapons and training; the Adjutant-General to the Forces, responsible for manpower, personnel, discipline, medical services, welfare, education, and the women's services; and the Quartermaster-General to the Forces, responsible for supplies, transport and, jointly with the Permanent Under-Secretary, works services.

Organisation of the Active Army

The active Army is organised in 30 arms and services¹, which include the Household Cavalry, the Royal Horse Artillery, the Royal Armoured Corps (the historic Cavalry Regiments and the Royal Tank Regiment), the Royal Regiment of Artillery, the Corps of Royal Engineers, the Royal Corps of Signals (which provides land and wireless communications), the five regiments of Foot Guards (the Brigade of Guards), the regiments of the Infantry of the Line (grouped into brigades and the Parachute Regiment), the Army Air Corps (which operates light aircraft on reconnaissance and undertakes aerial observation and liaison work), the Royal Army Service Corps (responsible for the provision of food and fuel supplies and transport vehicles), the Royal Army Medical Corps, the Royal Army Ordnance Corps (responsible for most equipment and stores), and the Royal Electrical and Mechanical Engineers.

The Women's Royal Army Corps (formerly ATS) and the Queen Alexandra's Royal Army Nursing Corps (formerly QAIMNS) are both corps of the Regular Army, their officers and other ranks being subject to military law and the Queen's Regulations in the same way as members of the other corps.

Within the United Kingdom, the Army is organised into Scottish, Northern, Southern, Eastern, and Western Commands, London District, and Northern Ireland District. There are four main commands overseas: Middle East Land Forces, East Africa Command, Far East Land Forces, and the British Army of the Rhine (which forms part of Britain's contribution to the NATO forces).

In July 1957, plans were announced for reducing the Royal Armoured Corps, the Royal Artillery, the Royal Engineers and the infantry by a total of 51 regiments or battalions. Corresponding reductions are being made in supporting and administrative units.

Following extensive trials carried out in the British Army of the Rhine, Army field formations are being reorganised on the basis of flexible, self-contained infantry and armoured brigade groups, able to fight, to move and to maintain themselves under minimum direction from headquarters.

As the strengths of overseas garrisons are reduced, increased importance is being attached to a central strategic reserve, based mainly in the United Kingdom, which is being reconstituted on a brigade group basis.

Equipment

By the end of the five-year programme initiated in 1957, the weapons of the second world war will have almost completely disappeared and the Army will be completely rearmed with a new range of weapons, vehicles and other equipment.

The programme of rearmament launched in 1950 concentrated at first on the production of tanks and other armoured vehicles, infantry weapons, and modernised engineering and signal equipment. The Army was equipped with a complete

¹ These arms and services include the women's corps.

new range of wheeled vehicles and with large numbers of the *Centurion* medium tank, which proved outstandingly successful during the Korean war. More recently, a heavy gun tank, the *Conqueror*, has gone into service.

Increasing emphasis is being placed in current plans on transportability by air, in order to secure strategic mobility. Certain bulky items of equipment, such as heavy tanks, cannot be transported by air but, apart from these items, air portability is a major feature of the Army's new equipment. Equipment transportable by air in service or being planned includes the *Mobat* anti-tank gun and light vehicles for the infantry, the *Ferret* scout car and the *Saladin* armoured car in service with the Royal Armoured Corps, and an advanced guided missile anti-tank system and the *Thunderbird* surface-to-air anti-aircraft guided weapon for the Royal Artillery. Trials are taking place of an air-portable howitzer of Italian design.

For tactical mobility within a theatre of operations, new engineer equipment for rapid construction and repair and new bridging equipment are on order. To assist in achieving mobility on the battlefield itself, the *Centurion* tank is being equipped with more powerful armament, pending the entry into service of its successor, now under development; radio communications in the field are being greatly improved with new equipment which includes the *Manpack* portable set, a radio relay set, and a new set for armoured vehicles; a self-propelled gun of increased range and performance and an improved type of armoured personnel carrier are being designed; and the *Skeeter* helicopter is coming into service as a reconnaissance aircraft. By 1960, half the Army will have been equipped with the British version of the FN self-loading rifle, a weapon of Belgian origin adopted by the United Kingdom in the interests of standardisation with other NATO forces, and deliveries of the *Sterling* (L.2) sub-machine gun will have been almost completed.

Progress is being made in the introduction of surface-to-surface guided weapons, the first of which are being supplied by the United States. The first guided weapon course was started at the Royal Military College of Science in Berkshire as early as 1950. In 1955, groups of Army instructors began to receive training in the United States in the use of the *Corporal* guided missile; training in Britain is now given at the School of Artillery at Larkhill. Two artillery regiments have been equipped with the *Corporal*, and one of the regiments has joined the British Army of the Rhine (BAOR); the other unit will also join BAOR on completion of its training. Two heavy anti-aircraft regiments are being equipped with the *Thunderbird* surface-to-air missile. The Australian *Malkara* anti-tank guided weapon is on order. Short-range nuclear weapons are also being developed for the Army.

Recruitment and Training for the Regular Army

The normal method of entry for a regular commission in the Army is through the Royal Military Academy, Sandhurst (Camberley, Surrey), where selected cadets undergo a course lasting two years before receiving their commissions. This course gives a general military and academic background for all arms and services, and young officers on leaving Sandhurst then attend special arm courses to prepare them for their own arm, some attending technical courses at the Royal Military College of Science (Shrivenham, Berkshire) and at Cambridge University. Cadets may enter Sandhurst direct from school or after they have enlisted in the Army or been called up for National Service. Up to 40 scholarships are awarded each year on the results of a competitive examination held twice a year. University graduates may be accepted for direct regular commissions without previous service in the ranks.

The War Office also maintains a boarding school, Welbeck College, at Worksop, Nottinghamshire, where 150 boys are educated for two years between the ages

of 16 and 18 years. These boys pass into the Royal Corps of Signals, Royal Army Ordnance Corps or the Royal Electrical and Mechanical Engineers. A few may be commissioned into the Royal Engineers.

A small number of schoolboys are selected to take engineering or science degrees at the Royal Military College of Science as National Service officers and thereafter to be granted regular commissions. Regular commissions may also be granted to other officers already serving on National Service commissions or on short service commissions. Candidates for National Service and short service commissions are trained at the Officer Cadet School, Mons Barracks, Aldershot. At this school the course, which consists of purely military training, lasts for four months. Young men suitable for short service commissions are now sent direct to the Officer Cadet School instead of, as hitherto, having to serve for a period in the ranks.

Men wishing to enlist in the ranks must be British subjects between the ages of 17½ and 30 years, of good character, medically fit and able to pass an intelligence test. Those with certain trade qualifications may be accepted up to the age of 33 years. Men can sign on for 22 years (with the option of finishing their Colour Service at the end of six years or at the end of any consecutive period of three years thereafter, provided they give six months' notice in writing). Recruits may choose the corps in which they wish to serve and their wishes regarding trade training are met as far as possible.

On entry into the Army, other ranks are trained at the depots or with the training units of the arms or services for which they have been selected. This initial training consists of six weeks' basic military training common to all arms and services, and a further period of training which is special to the arm or service concerned. This latter training varies in length of time, e.g., infantry, four weeks; Royal Signals electronic technician, 22 weeks.

A boy can enlist in the Army as an apprentice tradesman, between the ages of 15 and 17; a junior leader, between the ages of 15 and 16½; and a drummer band boy, piper or tailor, between the ages of 15 and 17½ years.

After the age of 18 years, Army apprentice tradesmen serve nine years with the Colours and three years in the Reserve. Boys enlisted for training with junior leader units may serve either for nine years with the Colours and three years in the Reserve, or six years with the Colours and six years in the Reserve. The object of the junior leaders' units is to produce long-term regular warrant officers and senior non-commissioned officers, and that of the apprentice schools is to produce warrant officer and non-commissioned officer tradesmen for the Regular Army, some of whom may become specialist commissioned officers.

Women may enlist into the Queen Alexandra's Royal Army Nursing Corps or into the Women's Royal Army Corps between the ages of 17½ and 33 years.

The Reserve Army

With a smaller Regular Army, the Reserve Army, consisting of the Army Emergency Reserve and the Territorial Army, will have an increasingly important part to play.

The *Territorial Army* consists of volunteer officers and other ranks (including women), National Service officers and men carrying out their statutory obligation of three and a half years' part-time service after completing their whole-time service with the Army, and the Territorial Army Reserve of Officers. With the end of National Service it will become a wholly volunteer force. Its main role in the event of war would be the defence of the United Kingdom, but some units might be needed overseas and all its members are liable for service in any part of the world when the army reserve is called out by proclamation. Volunteers are required to

attend annual camp and to carry out a minimum number of training periods. Selected units undergo civil defence training each year and attend a civil defence camp once every four years. While the military authorities are responsible for policy, training and discipline, local administration of the Territorial Army is carried out largely by county territorial and auxiliary forces associations.

The *Army Emergency Reserve* has as its main function to provide essential communications and the technical and administrative services required on mobilisation by both the Regular and the Territorial Armies. It consists of specialist units and pools of skilled men—both volunteers and part-time National Service men—who can be called upon at short notice to fill gaps in regular units.

Cadet Forces

The *Combined Cadet Force (CCF)* and the *Army Cadet Force (ACF)* provide training on Service lines for boys between the ages of 14 and 18 years. The CCF provides training in schools in which education is continued to the age of 17 years or above. Cadets receive a general basic training and then specialised training in the Royal Navy, Army or Royal Air Force sections. Contingents are affiliated to regular units and establishments of the Services. The ACF is recruited from schools which do not raise contingents of the CCF, and from boys who have left school. Like all the pre-Service organisations, these forces provide citizenship and character training as well as specifically military training. There is a training centre for the CCF and ACF at Frimley Park, Surrey.

THE ROYAL AIR FORCE

The Royal Air Force is administered by the Air Council, composed of the Secretary of State for Air, who is president, and seven other members. The Parliamentary Under-Secretary for Air is vice-president and the Permanent Under-Secretary of State for Air, who is a civil servant, is secretary of the Council. The Service members are the Chief of the Air Staff, who is responsible for strategic policy and the fighting efficiency of the RAF; the Vice-Chief of the Air Staff, responsible for inter-Service policy, operations, intelligence, liaison with other air forces, standardisation and ground defence; the Deputy Chief of the Air Staff, responsible for the preparedness for war of the RAF, for command, staff and air training, and for policy regarding future aircraft and weapons; the Air Member for Personnel; and the Air Member for Supply and Organisation.

Commands

The Royal Air Force is organised into commands administered by the Air Council:

At Home: Bomber, Fighter, Coastal, Transport, Flying Training, Technical Training, Maintenance and Signals Commands.

Overseas: The Middle East Air Force (headquarters in Cyprus), the Far East Air Force (headquarters at Changi, Singapore), Royal Air Force, Germany (Second Tactical Air Force, stationed in Germany as part of Britain's contribution to the NATO forces), British Forces, Arabian Peninsula (headquarters in Aden), and Royal Air Force, Malta.

Aircraft and Equipment

The spearhead of the RAF is the force of four-engined jet bombers, which is building up steadily. At first, the majority of squadrons were equipped with *Valiants*, but the proportion of *Vulgans* and *Victors*, with greater performance, is rising rapidly. Stocks of nuclear weapons are increasing, together with Bomber Command's ability to carry them. Improved marks of the V-bombers, now on

order, will carry a propelled stand-off bomb and will form for many years the foundation of Britain's deterrent power, though ballistic missiles will gradually play an increasing part.

In addition to their strategic role, the V-bombers provide reconnaissance aircraft of great range and accuracy. The present reconnaissance force is composed mainly of *Valiants*, but these are being replaced by Mark 2 *Victors*.

The tactical bomber force in Bomber Command is at present equipped with *Canberra* twin-engined jet bombers, but will later be re-equipped with *Valiants*. This force is committed to NATO. A tactical strike reconnaissance aircraft of great versatility, the *TSR.2*, is being developed for Army support and other tactical operations.

Surface-to-air guided weapons are being introduced, but manned fighters will continue to be needed to deal with manned aircraft, the stand-off bomber and radar-jamming aircraft, to prevent reconnaissance and to investigate unidentified movements. Fighter Command is equipped with *Hunter* day fighter and *Javelin* all-weather fighter aircraft. The *Lightning*, the RAF's first supersonic fighter, is in production and is expected to be in service by 1960. The aircraft is being fitted with an electronic computer to aid bomber interception and will be equipped for flight-refuelling to augment Fighter Command's capacity for overseas reinforcement.

Air defences are being recast in order to concentrate on the defence of nuclear bases. In 1957, an organisation was set up in the Air Ministry to co-ordinate and speed up the introduction of defensive guided missiles and their associated radar, and to integrate them with the existing control and reporting and fighter defence systems.

The system of control and reporting, which has been built into a highly efficient organisation, is closely linked with the radar systems of Continental allies. Great advances in the development of radar have been made in recent years. A reconstructed radar chain now covers the whole of the United Kingdom. The high performance of the latest system makes it possible to have greatly improved cover with a smaller number of stations.

Full-scale service trials of the RAF's first air-to-air guided missile, *Fireflash*, began in 1957 with *Swift* aircraft, for experimental work and training purposes. A more advanced missile, the *Firestreak* (also in service with the Fleet Air Arm), will be fitted to Mark 7 and 8 *Javelins* and will be an integral part of the *Lightning* weapon system until replaced by a guided weapon of even greater performance.

The development of surface-to-air guided weapons is well advanced. The first RAF missile station, at North Coates, Lincolnshire, was brought into use for service trials and training in May 1958. A surface-to-air missile of the semi-active homing type known as *Bloodhound*, after full-scale trials, is now being delivered to the RAF. The RAF is co-operating with the Army in operational trials of the *Thunderbird*. More advanced types are being developed.

Coastal Command's long-range maritime reconnaissance force, which is committed to NATO, is wholly equipped with *Shackleton* aircraft. An improved version—the *Shackleton* Mark 3—is now in service, and earlier marks are being progressively modernised to an equivalent standard.

Transport Command is being re-equipped to provide increased mobility for the strategic reserves of both land and air forces. A *Comet 2* squadron was formed in 1956—the first all-jet transport squadron in any air force—and has proved very successful. *Britannia* aircraft are coming into service during 1959–60 for long-range transport; for short and medium ranges, use will still be made of piston-engined *Hastings*. The *Beverley* freighter, now in service, is a versatile aircraft which can lift large loads. A small number of *Britannic 3* freighter aircraft are

on order to supply the need for a strategic freighter able to carry large military loads quickly over long distances. An order has also been placed for a military version of the Armstrong Whitworth *Argosy*, which will be used as a tactical freighter for dropping parachutists as well as for normal movement of troops and stores. *Twin Pioneer* short-range aircraft are now in service.

Increasing use is being made of helicopters for operations and for the Search and Rescue Organisation of Coastal Command, which in peace time also operates for the rescue of civilians involved in shipping accidents or other difficulties in coastal waters. The *Sycamore* and *Whirlwind* helicopters have given good service, particularly in Malaya, and the Bristol 192 twin-engined helicopter is on order.

Basic flying training schools are being re-equipped with the *Jet Provost* trainer and an order has been placed for a training version of the *Lightning*. The RAF was the first air force to adopt all-jet training.

In recent years there has been a great deal of airfield development in the United Kingdom to provide for the operation of the V-bombers and the new fighters, and a major programme of airfields, depots and technical facilities has also been carried out for units of the United States Air Force stationed in Britain.

Recruitment and Training for the Regular Air Force

It is the aim of the Air Council that all pilots, navigators and air electronics officers shall enjoy commissioned status. Appointment to a permanent commission in the General Duties Branch may be obtained either through a cadetship at the Royal Air Force College, Cranwell, Lincolnshire (pilots and navigators only), or by entry as a university graduate under special conditions. The majority, however, enter on short-term commissions or under the direct commission scheme which offers the choice of serving for eight or twelve years on the active list and going out with a gratuity, or of staying in the Service to qualify for pension. Except for those entering through Cranwell, where the course lasts three years, flying training takes about 18 months for pilots and one year for navigators and air electronics officers.

Officers in ground branches are usually found from people in civil life, some of whom already hold professional qualifications, who enter the Royal Air Force on short service commissions. Short service officers may be selected for permanent commissions while in the Royal Air Force.

Permanent commissions may also be obtained through cadetships at the Royal Air Force Technical College, Henlow, Bedfordshire (Technical Branch), the RAF College, Cranwell (Secretarial and Equipment Branches), or the Royal Military Academy, Sandhurst (RAF Regiment). University graduates are also eligible for permanent commissions under special conditions. Some technical cadets proceed after one year at Henlow to a three-year degree course at a university.

Women's Royal Air Force

Women play an important part in the work of the Royal Air Force and of its reserve and auxiliary formations. The WRAF is an integral part of the Royal Air Force and its members train with and work alongside airmen in the same trades, serving both in the United Kingdom and overseas. Under a scheme introduced in March 1959, some members of the WRAF are recruited to serve at local RAF stations while living at home. Nursing services are provided by *Princess Mary's Royal Air Force Nursing Service*.

Auxiliary and Reserve Forces

The *Royal Auxiliary Air Force* consists of fighter control units raised and maintained by Territorial and Auxiliary Forces Associations.

The *Royal Air Force Volunteer Reserve*, which is part of the Royal Air Force Reserve, provides a pool of officers, airmen and airwomen mainly with previous Air Force service, who, like the personnel of the Royal Auxiliary Air Force, train on a part-time basis. It includes members of the university air squadrons.

Part-time National Service men serve in Class H of the Royal Air Force Reserve or they may volunteer to join the Volunteer Reserve or the Royal Auxiliary Air Force.

Royal Observer Corps

Over 15,000 men and women form the *Royal Observer Corps*, a predominantly civilian and voluntary organisation, administered by Fighter Command, and devoted to the specialised tasks of identifying and reporting the movements of aircraft, and of measuring and reporting on radioactivity in the event of nuclear attack. The corps originated in the first world war to report the movements of German aircraft and zeppelins over Britain and was officially established in 1925. By 1961, 1,500 underground operation centres will have been built for the corps; the first was opened in August 1959.

Air Training Corps

The *Air Training Corps* provides pre-Service training for boys between the ages of 14 and 18 years. Like the other pre-Service formations, it seeks to inculcate good citizenship as well as training for the RAF.

HOME DEFENCE

The second world war showed the importance of having trained and organised bodies of men and women ready to mitigate the effects of enemy air attacks on the civil population; and the Civil Defence Act, 1948, recognised that a permanent system of civil defence was essential to national safety. The development of nuclear weapons, while it has greatly intensified the problems of civil defence and has called for much replanning which is still in process, has not lessened the need for an efficient civil defence organisation. Civil Defence, in the words of the 1958 White Paper on Defence, 'remains an integral part of the defence plan'.

In the event of nuclear attack, the problems of rescue, fire-fighting and welfare operations would be greatly intensified by the presence of radioactivity, which would have to be detected and its extent and intensity measured. The first call would have to be met by the civilian services on the spot, and these would be supported by the armed forces in the country at the time, whether regular or reserve, which were not immediately required for combat operations. The Minister of Defence is charged with planning the part which the armed forces would play in home defence, and with co-ordinating the plans of the military authorities with those of the civil authorities.

The country's economic capacity limits the effort which can be devoted to home defence preparations; and the main defence objective must be to maintain the nuclear deterrent—not to prepare for war but to prevent it. In home defence the main task in peace time is to keep a local organisation in being as a framework for expansion if necessary, to provide training equipment and to proceed with essential research. The Government has declared its conviction that, if the deterrent were to fail, countless lives could be saved by civil defence preparations made in advance.

Organisation of Civil Defence

Civil defence planning in the United Kingdom is the responsibility of a number of ministers each of whom undertakes the duties which, in war time, would

represent a natural extension of his peace-time functions. As the development of effective civil defence services involves much detailed planning at local level, the central Government has enlisted the assistance of local government authorities, of industry and commerce and of public bodies of many kinds, including voluntary organisations such as the Voluntary Aid Societies and the Women's Voluntary Services.

In addition to his direct responsibilities under the Civil Defence Act, 1948, the Home Secretary is responsible for co-ordinating the defence plans of all the civil agencies of the Government. The Secretary of State for Scotland is responsible for civil defence matters in Scotland.

In England and Wales, the Home Secretary supervises the civil defence activities of the police and fire services, and he administers the Civil Defence Corps and the Industrial Civil Defence Service as well as such matters as shelter policy and the national air-raid and fall-out warning and monitoring systems. The Civil Defence Department of the Home Office is under the charge of a Director-General of Civil Defence, appointed by the Home Secretary. Other Government departments have direct responsibility for the civil defence applications of the services which they control; for example, the Ministry of Health is responsible for the hospital and first-aid services, and the Post Office for telecommunications.

In Scotland, the Scottish Home Department deals with questions corresponding to those dealt with by the Home Office in England and Wales, and the Department of Health for Scotland is responsible for such matters as the hospital and first-aid services.

In Northern Ireland, the Civil Defence Act (Northern Ireland), 1950, places responsibility for civil defence matters on the Ministry of Home Affairs, which may arrange for other departments to undertake some functions on its behalf.

The co-ordination of civil defence planning in Great Britain necessarily involves much work by interdepartmental committees, on which all departments with civil defence responsibilities are represented, in order that plans and programmes may be constantly reviewed to take account of changes in the scale and nature of possible attacks.

England is divided into ten civil defence regions in charge of Regional Directors of Civil Defence, appointed by the Home Office, and there is also a Director of Civil Defence for Wales. Their duties include liaison with the armed forces and the planning of combined exercises. There is no corresponding regional organisation in Scotland, where planning is carried out centrally, although the country is divided into zones for operational purposes.

The Civil Defence Services

To provide the personnel required in war for civil defence tasks, the following services, in which in times of peace only part-time service is required, are raised in Great Britain¹ by voluntary recruitment of civilians, both men and women:

1. The Civil Defence Corps, which was established in May 1949, to assist local and other authorities to carry out their civil defence functions.
2. The Industrial Civil Defence Service, which comprises civil defence units formed in industrial and commercial premises.
3. The Auxiliary Fire Service, to reinforce the fire services maintained by local authorities under the Fire Services Act, 1947. (The Fire Service would become a national organisation in time of war.)

¹ In Northern Ireland there are three main services: the Civil Defence Corps, the Auxiliary Fire and Rescue Service, and the Hospital Service Reserve.

4. The National Hospital Service Reserve, limited at present to trained nurses and persons willing to be trained as nursing auxiliaries to reinforce the National Hospital Service in England and Wales. In Scotland, there is also an Ambulance Section of the Reserve to provide the additional manpower for the war-time operation of the Scottish Ambulance Service.

Subject to restrictions regarding age and obligation to serve in the armed forces, recruits for all services are drawn from men and women who are willing to serve and who will undertake to train regularly. The Government does not pay the volunteers for their services but reasonable out-of-pocket expenses are reimbursed.

Strengths in Great Britain at 31st March, 1959, were:

Civil Defence Corps	367,500
Industrial Civil Defence Service (at 31st October, 1958) ..	195,171
Auxiliary Fire Service	19,821
National Hospital Service Reserve	62,603

The Civil Defence Corps. This Corps is recruited and organised by certain local authorities (mainly the councils of counties and county boroughs in England and Wales, or counties and large burghs in Scotland) in local divisions. The local divisions are subdivided into five sections¹ as follows:

Headquarters:	control of civil defence operations, communications, reconnaissance (including the identification of toxic agents).
Wardens:	public guidance and control, reporting of damage and radioactive fall-out, organisation of immediate self-help measures, and the local control of life-saving operations.
Rescue:	rescue of trapped persons and rendering first aid to them.
Ambulance and Casualty Collecting:	first aid, conveyance of casualties to hospital, and the organisation of stretcher-bearers.
Welfare:	escort and welfare of evacuees, care of homeless, assistance with billeting, rest centres, emergency cooking and feeding, public information centres.

The Industrial Civil Defence Service. The Government has invited the managements of the larger industrial and commercial undertakings to form civil defence units for the protection of their own personnel and to assist the public civil defence services. The Government's aim is to have an efficient civil defence unit in all premises where more than 200 people work. Units formed under these arrangements comprise headquarters, warden, rescue, first aid and fire guard sections. These units train in much the same way as the Civil Defence Corps, and in war would operate in close association with it and with the other public civil defence services.

The Auxiliary Fire Service. Fire authorities (see p. 104) are required to enrol auxiliary firemen as members of fire brigades for service which is restricted, except in a war emergency, to such duties as are desirable for training. This organisation is known as the Auxiliary Fire Service, but the personnel are members of the individual brigades in which they are enrolled.

¹ Four in Scotland, where there is no separate Ambulance and Casualty Collecting section, ambulance services being provided by the National Hospital Service Reserve, and casualty collecting being a warden duty. In Northern Ireland, the Civil Defence Corps, which is organised directly by the Ministry of Home Affairs and not by the local authorities, consists of three sections only—Headquarters, Wardens and Welfare; the Ambulance Service forms part of the Hospital Service, and the Rescue Section has been integrated with the Auxiliary Fire Service to form the Auxiliary Fire and Rescue Service.

Training

Members of the Civil Defence Corps are required to undertake the training necessary to enable them to carry out the duties of an ordinary member of the section of the corps to which they belong, and thereafter to undertake a few hours' refresher training, including exercises, each year. If they wish to increase their knowledge they may undertake courses of additional and advanced training.

Civil defence instructors are trained either at one of the three central training schools or locally, under arrangements made by local authorities, in accordance with directions given by the Home Office or the Scottish Home Department. Courses and studies for senior officials concerned with civil defence are held at the Civil Defence Staff College at Sunningdale, Berkshire, and in Scotland, at Taymouth Castle, Perthshire.

Auxiliary firemen are trained by officers and men of the regular brigades, who themselves receive special training in emergency fire-fighting at the Home Office Fire Service Training Centre at Moreton-in-Marsh, Gloucestershire. They are encouraged to gain practical experience of fire-fighting by performing stand-by duty at fire stations to enable them to respond, with regular members of the brigade, to calls to fires. Exercises are also held, involving the control and operation of large numbers of pumping and other fire-fighting appliances.

The Police

In time of war the police would continue to be responsible for the maintenance of law and order and the control of traffic, and they would also be responsible for certain additional war-time and civil defence tasks. In all these duties they would have the aid of the Special Constabulary.

Role of the Armed Forces

The Services have a vital role to play in civil defence; all armed forces, whether regular or reserve, in the country at the outbreak of war who are not engaged in active operations against the enemy will have to be prepared to assist in the struggle for survival. The armed forces are in no sense a substitute for civil administration; the aim will be to support the civil authorities by all possible means. All units of the Regular and Reserve Armies are trained in peace time for the civil defence tasks they may be expected to perform in war. In addition, between 1955 and 1958, some 25,000 men of the Royal Air Force were trained in emergency fire-fighting operations at Home Office training centres to enable them to serve as firemen in a National Fire Service.

There is close liaison in peace time between the civil and military authorities at all levels. Joint exercises are continually being held and everything possible is being done to align the civil and military chains of command. As a result, the functions which the military authorities could undertake in support of the civil authorities have been more clearly defined: there is also a growing understanding among the civil authorities of the part that the military authorities can best play.

There are two main ways in which the fighting Services can render assistance: by helping the civil authorities to maintain control; and by the direct employment of units on various tasks such as aid to the police in the maintenance of law and order and traffic control, aid to the fire service, assistance in the reception and care of the homeless, in the treatment and evacuation of casualties and in the clearance of radioactive fall-out zones, the provision of guards, the maintenance of road, rail and water communications, light rescue, reconnaissance and the provision and running of camps.

IV. SOCIAL WELFARE

STATE AND VOLUNTARY SERVICES

In Britain the State is now responsible, through either central or local government authorities, for a range of services covering subsistence for the needy, education and health services for all, housing, employment or maintenance, the care of aged or handicapped persons, the care of children, the nutrition of mothers and children, and sickness, maternity and industrial injury benefits, widow's and retirement pensions and family allowances. Public authorities in the United Kingdom are spending nearly £3,500 million a year on social services; that is over £65 a year a head of the population.

Voluntary organisations, especially the Churches, were the pioneers of nearly all the social services. They provided schools, hospitals, clinics, dispensaries, and social and recreational clubs before these were provided by the State. They made themselves responsible for the welfare of the very young and the very old, the homeless and the handicapped, before it was generally accepted that the whole community had a responsibility towards these people. Where the services and the facilities they provided were adequate, they have been encouraged to continue. The State now supplements these voluntary services and provides financial assistance, sees that essential services are brought within the reach of every citizen, and ensures that the necessary standards are maintained.

Many voluntary social services surround and supplement the State services. The two types are complementary, not competitive, and they merge into each other. State services often work through voluntary agencies specially adapted to serve individual or special needs. The officers of the National Assistance Board, in carrying out their duties, co-operate with the workers of many voluntary social service societies, while the institutional provision made by the State and by local authorities for the care of the chronic sick and the aged is supplemented by voluntary homes of various types for the care of the sick and elderly, most of whom receive State pensions or benefits.

Voluntary Organisations

The number of voluntary charitable societies and institutions in Britain runs into thousands. Some of them are large and some are small and local in character. Some have general aims and others, such as the Royal National Institute for the Blind, have been established for a particular purpose. The societies co-operate with each other and with local authorities engaged on the same work.

Foremost among societies providing general social service are the National Council of Social Service, with the Scottish Council of Social Service and the Northern Ireland Council of Social Service, and the Family Welfare Association. The National Council of Social Service was established in 1919, and the corresponding Scottish Council in 1943, to create a closer link between the machinery of government and the voluntary activities of the ordinary citizen. The Family Welfare Association, formerly the Charity Organisation Society, which was founded in 1869, works on personal lines to help any individual or family in need or difficulty. It works mainly in London, but there are some 180 voluntary family case-work agencies serving other areas of Britain.

There is a Central Council for the Care of Cripples, and the major societies caring for homeless children are represented on the National Council of Associated Children's Homes. Other examples of co-ordination in a specialised field are the National Association for Mental Health, the Women's Group on Public Welfare and the National Marriage Guidance Council.

Societies working on a national scale whose social work is definitely religious in inspiration include the Salvation Army, the Church Army, the Committee on Social Service of the Church of Scotland, the Church of England Children's Society, the Church of England Moral Welfare Council, the Young Men's Christian Association, the Young Women's Christian Association, the Society of St. Vincent de Paul, the Crusade of Rescue, the Jewish Board of Guardians and the Catholic Marriage Advisory Council.

War-time organisations such as the Women's Voluntary Services (WVS) and the Citizens' Advice Bureaux continue, with official support, to do very valuable work. The Citizens' Advice Bureaux (there are still over 400 of these) act as interpreters between the Government departments and the ordinary citizen. WVS activities are many and various. They include welfare work for children, the aged and the sick, and for certain foreign workers, as well as relief work in emergencies.

The old-established British Red Cross Society not only aids the sick and wounded in time of war but works in peace time for 'the improvement of health, the prevention of disease, and the mitigation of suffering'. It is, in particular, developing its welfare services for civilian disabled, invalid and crippled children and the aged. The members of the St. John Ambulance Brigade and, in Scotland, the St. Andrew's Ambulance Association similarly render voluntary auxiliary medical services and undertake welfare work for the sick and the infirm.

Social Workers

While the voluntary worker giving full-time or part-time service has done pioneer work in many of Britain's social services and continues to play an essential part in probably every service, social services of all kinds increasingly depend for their operation chiefly on the professional social worker, that is the full-time salaried worker trained in the principles and technique of social work. Training for many forms of social work consists of a basic university degree, diploma or certificate course in social science followed by a specialised training for a particular service. The latter is sometimes organised by the profession concerned. An attempt is being made to lessen specialisation in social work. The working party on social workers in local authority health and welfare services, which reported in May 1959, recommended the establishment of a national council for social work training and a new general training in social work, to be available outside the universities, leading to a national qualification. The courses of professional training provided in the universities and one or two other courses of comparable standard would continue to afford the highest qualifications.

Voluntary organisations were the pioneers in the employment and training of social workers, but Government departments and local authorities now employ a considerable number of trained social workers of various kinds. Such workers include some welfare officers and mental health workers; children's care organisers; children's officers, child care officers and homes' residential staff for work under the Children Act, 1948; neighbourhood workers; youth leaders; almoners; mental health workers; psychiatric social workers; tuberculosis care workers; housing managers; personnel managers and probation officers—in fact, representatives of most branches of social work.

NATIONAL INSURANCE AND RELATED SERVICES

National Insurance, Industrial Injuries Insurance, Family Allowances and National Assistance together constitute a comprehensive system of social security in the United Kingdom which ensures that in no circumstances need anyone fall below a certain minimum standard of living. The Ministry of Pensions and National Insurance administers the first three of these measures in Great Britain; in Northern Ireland they are administered by the Ministry of Labour and National Insurance.

National Assistance is administered by the National Assistance Board in Great Britain, and in Northern Ireland by the National Assistance Board for Northern Ireland. Pensions and welfare services for war pensioners and their dependants are the responsibility of the Ministry of Pensions and National Insurance throughout the United Kingdom.

Appeals relating to claims for insurance benefits, family allowances or war pensions, or applications for assistance, are not decided by the ministry or the board but by independent authorities appointed under the Acts.

The Poor Relief Act of 1601 can be regarded as the starting-point of public provision for social security in England and Wales. From the beginning of the present century, and particularly after the Royal Commission on the Poor Laws and Relief of Distress had issued its report, with the influential Minority Report, in 1909, a strong movement arose against the form and spirit of the poor law as it had been administered under the Poor Law Amendment Act of 1834. The first departure from the poor law as the sole means of relief given from public funds was the introduction in 1908 of non-contributory old age pensions granted on a test of means. Other changes followed, the broad effect of which was gradually to transfer the old poor law functions from local to central government administration, and the process was completed in 1948 with the passing of the National Assistance Act. In the same period there was a development of compulsory insurance administered on a national basis. The Workmen's Compensation Act of 1897 foreshadowed the present National Insurance Industrial Injuries scheme; although the system introduced was not a State-administered insurance scheme, it required employers to pay compensation to workers for accidents at work. In 1912 came the National Health Insurance scheme and with it the introduction of the contributory principle on which all later measures have been based. In return for a small weekly contribution it provided a small cash payment and medical treatment without charge during sickness. It applied only to a limited number of the lower-paid workers. In 1912 also a limited scheme of unemployment insurance was started. This was extended in 1920 to cover the great majority of employed persons, a very necessary provision in view of the large-scale unemployment of the inter-war years. In 1926 contributory pensions for old people, widows and orphans were introduced.

By the beginning of the second world war the social services in Britain were among the best in the world, but they lacked co-ordination by the very fact of their piecemeal development, and they were not universal.

Under the stimulus of war, when plans for post-war reconstruction were being formulated, Lord (then Sir William) Beveridge was invited by the National Coalition Government to investigate the country's existing social insurance system. In 1942 the Beveridge Report was published; it recommended the creation of a comprehensive and unified system of social insurance. The report aroused intense interest and was accepted in general by the Government as the basis on which the future social security structure should be built.

In the immediate post-war years a series of Acts introduced a new comprehensive system which became fully operative on 5th July, 1948. Adjustments have been made by a number of subsequent Acts.

Family allowances and national insurance benefits or allowances other than maternity, unemployment or sickness benefit, are included in the taxable income on which income tax is assessed. On the other hand, various income tax reliefs and exemptions are allowed on account of age or liability for the support of dependants (see pp. 429 and 430).

Reciprocity

The national insurance, industrial injuries and family allowances schemes of Great Britain and those of Northern Ireland and the Isle of Man operate as a single system. Northern Ireland and the Isle of Man as well as Great Britain are party to most of the agreements with other countries. Reciprocal agreements on national insurance, industrial injuries and family allowances are in operation with Belgium, Norway and Jersey. Agreements with Malta, France, Israel, Italy, Luxembourg, the Netherlands, Norway, Sweden, Switzerland and Yugoslavia cover national insurance and industrial injuries insurance. With Australia and New Zealand there are agreements on national insurance and family allowances. There is an agreement with Guernsey on family allowances only, with Cyprus on national insurance, with Denmark on industrial injuries insurance, and an agreement with the Irish Republic which covers national insurance and contains some industrial injuries provisions in relation to seafarers. Other agreements are under negotiation.

FAMILY ALLOWANCES

Family allowances have been provided by the State since August 1946, under the Family Allowances Act of June 1945. Nearly 5½ million allowances are being paid in Great Britain to just under 3½ million families with two or more children. An allowance is paid for each child other than the first or only child below the age limits. The age limits are 15 years for children who leave school at that age, 16 years for those who are handicapped, and 18 years for those who remain at school or are apprentices. The rate of the allowance is 8s. a week for the second child and 10s. a week for the third and each subsequent child below the age limits.

Family allowances are paid from the Exchequer and their object is to benefit the family as a whole; they belong to the mother, but may be paid either to the mother or the father. There is no insurance qualification, and parents who are not British subjects may claim allowances if they satisfy a special residence qualification.

The corresponding scheme in Northern Ireland makes similar provision for family allowances.

NATIONAL INSURANCE

The National Insurance Act, 1946, came into full operation on the 5th July, 1948. It has been amended by the National Insurance Acts, 1949 and 1951, the Family Allowances and National Insurance Acts, 1952 and 1956, and the National Insurance Acts, 1953–59. The Acts apply, in general, to everyone over school-leaving age living in Great Britain. There are similar schemes in Northern Ireland and the Isle of Man.

Contributors are divided into three classes:

Class 1—Employed persons. Those who work for an employer under a contract of service or are paid apprentices—about 22 million.



Women's Voluntary Services' meals-on-wheels bring a hot dinner to this blind man twice a week.



The district nurse visits a young patient in his home. The first district nurse was appointed, privately, in 1859. Home nursing is now one of the free services in the National Health Service (see p. 153).



Commonwealth students at the Northampton College of Advanced Technology, London. Many Commonwealth students from overseas are in Britain (see p. 172).

A tutorial at Sidney Sussex College in the University of Cambridge (see p. 167).



- *Class 2—Self-employed persons.* Those in business on their own account and others who are working for gain but do not work under the control of an employer—nearly 1½ million.

Class 3—Non-employed persons. All persons insured who are not in class 1 or 2—about half a million.

This general classification is subject to certain modifications, made by regulations, to meet special circumstances. Married women engaged only in their own household duties are, in general, provided for by their husbands' insurance and cannot be insured in their own right unless they were insured under the old scheme on the 5th July, 1948, and continued to pay contributions as non-employed persons, or unless they have since taken up paid work. Employed married women may choose whether to pay separate contributions themselves or to rely on the cover provided by their husbands' contributions, which make them eligible for maternity and home confinement grants, retirement pension at lower rate, widow's benefit and death grant. Students receiving full-time education and unpaid apprentices need not pay contributions. Up to the age of 18, contributions are credited to them. Over that age they may, if they wish, pay as non-employed persons (class 3) and thus safeguard their title to widow's benefit and to retirement pension at full rate. Self-employed and non-employed persons whose income is not more than £156 a year can apply to be excepted from liability to pay contributions.

Contributions

The main weekly rates of contribution in August 1959 are shown in Table 7.

TABLE 7
WEEKLY NATIONAL INSURANCE AND NATIONAL HEALTH SERVICE CONTRIBUTIONS

	MEN(a)						WOMEN(a)					
	National Insurance (b)		Health Service		Totals		National Insurance (b)		Health Service		Totals	
CLASS 1	s.	d.	s.	d.	s.	d.	s.	d.	s.	d.	s.	d.
Employed persons:												
Paid by employee ..	8	0½	1	10½	9	11	6	7½	1	4½	8	0
Paid by employer ..	7	9½		5½	8	3	6	3½		5½	6	9
TOTALS ..	15	10	2	4	18	2	12	11	1	10	14	9
CLASS 2												
Self-employed persons	9	10	2	2	12	0	8	4	1	8	10	0
CLASS 3												
Non-employed persons	7	5	2	2	9	7	5	11	1	8	7	7

(a) Boys and girls under 18 years of age contribute at lower rates.

(b) Including, for class 1, the industrial injuries insurance contribution of 8d. from employee and 9d. from employer for a man, and 5d. from employee and 6d. from employer for a woman.

The Exchequer supplements these contributions from general taxation. They are normally paid on a single contribution card by national insurance stamps bought from a post office. It is the employer's responsibility in the first place to see that the class 1 contributions are paid, but he can deduct the employee's share from his or her wages. The self-employed and non-employed must stamp their own cards. Contributions are usually credited for weeks of unemployment, sickness or injury, or if widow's benefit is being paid.

An insured person ceases to be liable for national insurance contributions when he retires, or is deemed to have retired, from regular employment. If such a person does any work as an employed person thereafter, he must pay an industrial injuries contribution; his employer's liability remains the same as shown in Table 7.

Benefits

The scheme provides sickness, unemployment, maternity and widow's benefit, guardian's allowance, retirement pension and death grant. Persons in class 1 are covered for all benefits; those in class 2 for benefits other than unemployment and industrial injuries benefits; and those in class 3 for benefits other than sickness, unemployment and industrial injuries benefits, and maternity allowance.

For most of the benefits there are two contribution conditions. First, before any benefit can be received, a minimum number of contributions must actually have been paid since entry into insurance; secondly, the full rate of benefit cannot be received unless a certain number of contributions have been paid or credited over a specified period. For guardian's allowance and industrial injuries benefits there are no contribution conditions.

Rates of benefit have been increased since the scheme began. The rates current in August 1959 are set out below.

Sickness Benefit

The standard weekly rate of sickness benefit for a man or woman over 18 years of age (except a married woman) is 50s., with an increase of 30s. for an adult dependant and 15s. a week for the first or only child under the family allowances age limits, with 7s., in addition to any family allowance payable, for each subsequent child. The weekly rate for a married woman is 34s., but she is paid at the 50s. rate if she is maintaining an invalid husband or is separated from her husband and cannot get financial support from him.

Unless 156 class 1 or class 2 contributions have been paid since the entry into insurance, sickness benefit can be drawn only for a year but, in general, it continues for as long as sickness lasts, provided that 156 contributions have been paid.

Unemployment Benefit

The rates of unemployment benefit are the same as for sickness benefit. Unemployment benefit is payable in the first place for 30 weeks, but it may be continued for a maximum of 19 months in all, according to the person's record of contributions paid as against unemployment benefit drawn in recent years.

Maternity Benefit

A maternity grant of £12 10s. is payable for a confinement, provided the required contribution conditions have been satisfied, and a further grant of £12 10s. for each additional child born at the confinement who is alive twelve hours after birth. A home confinement grant of £5 is payable where the mother is confined elsewhere than in accommodation provided free under the National Health Service or otherwise paid for out of public funds. A maternity allowance of 50s. a week, beginning the eleventh week before the expected week of confinement, payable for

18 weeks, is available for working women who satisfy the contribution conditions. These are that in the 52 weeks ending 13 weeks before the expected week of her confinement, the claimant must have paid 26 contributions at the full rate as an employed or self-employed person and, for an allowance at the maximum rate, have a total of at least 50 contributions paid or credited. Increases of maternity allowance for dependants are payable in certain circumstances at the same rates as increases of sickness benefit.

Widow's Benefit

There are three kinds of widow's benefit, paid only on the deceased husband's insurance. A widow's allowance of 70s. a week plus 20s. a week for the first or only child under the age limits and 12s. a week for second and subsequent children (in addition to family allowances) is paid for 13 weeks. A widowed mother's allowance of 70s. a week is paid following widow's allowance to a widow who has a child under the age limits; she also receives 12s. a week, in addition to any family allowance, for each child after the first. A widowed mother's allowance at the lower rate of 50s. a week may be paid, in certain circumstances, to a widow who has residing with her a young person under 18 years of age (for example, where there is a son or daughter aged 17 who is neither at school nor an apprentice and, therefore, is no longer regarded as a child for family allowance purposes). A widow's pension of 50s. a week is paid to a widow who is 50 years of age or over at the time of the husband's death and has been married three years, or who is 50 (40 if the husband died before 4th February, 1957) or over when her widowed mother's allowance ends, provided three years have elapsed since the marriage. Widowed mother's allowance and widow's pension are reduced by 6d. for each complete 1s. of the first 20s. of earnings in excess of 80s. and 60s. respectively, and by 1s. for each shilling of higher earnings. In the case of widowed mother's allowance the total deducted in any one week cannot exceed 50s., whatever the earnings may be.

There are special rules to help widows to qualify for sickness or unemployment benefit if they are unable to obtain work when widow's allowance or widowed mother's allowance ends.

Guardian's Allowance

A guardian's allowance of 27s. 6d. a week may be paid to a person who has in his family a child whose parents have died and one of whom was insured under the National Insurance Acts. This continues while the child remains in the guardian's family and is a child within the meaning of the Family Allowances Act. In certain circumstances an allowance is paid on the death of one parent only: in the case of an illegitimate child, a child of divorced parents, or a child one of whose parents is missing on the death of the other parent.

Child's Special Allowance

A woman whose marriage has been dissolved or annulled may, on the death of her former husband, be paid an allowance for any children of that marriage who are below the family allowances age limits. The rate of the allowance is equal to the rate of the contributions the former husband had been making towards the support of the children, subject to a minimum of 5s. a week for each child and a maximum of 20s. a week for the first child and 12s. for each subsequent child, in addition to any family allowances.

Retirement Pension

Retirement pensions are paid to men at the age of 65, and to women at the age of 60, provided the required contribution conditions have been satisfied and subject

to retirement from regular employment. From the age of 70 (men) and 65 (women), however, the pension is payable whether or not the claimant has retired. The standard rate is 50s. a week. A married woman ordinarily qualifies for pension on her husband's insurance at the standard rate of 30s. a week. If after retirement a pensioner below the age of 70 (65 for a woman) earns over 60s. a week, 6d. is deducted from the pension for each 1s. earned over that amount up to 80s. and 1s. is deducted for each shilling earned over 80s.

Men and women are encouraged not to retire at minimum pension age and are able to earn a larger retirement pension by continuing at work and paying contributions. For every 12 contributions they pay for weeks of work between the ages of 65 and 70 (men) or 60 and 65 (women) their pension is increased by 1s. a week. The pension of the wife of such a contributor is increased by 6d. a week for every 12 contributions paid by the husband after he has reached the age of 65 and the wife has reached 60, and it continues at this rate up to the time of the contributor's death; if his wife survives him her increments of pension are recalculated at the 1s. rate if the 6d. increases were earned after 16th July, 1951. A man reaching the age of 65 who continues at work for a further five years can therefore receive a pension of as much as 71s. a week at the age of 70. If he has a wife not more than five years younger than himself, their combined pensions can be 111s. 6d. a week; if the wife survives her husband her pension can be 71s. a week.

A retirement pensioner is entitled to an increase of 30s. a week for his wife if she is not entitled to a retirement pension herself, either on her own or on his insurance. He is also entitled to an increase of 15s. for the first child under the family allowances age limits, and 7s. for each succeeding child, in addition to any family allowance payable. If he is not entitled to an increase for his wife, or if his wife is not herself entitled to a retirement pension, he may, in some circumstances, claim an increase for a woman having the care of his child or children.

Under the National Insurance Act, 1959, a system of graduated contributions and pensions, related to earnings, is to be introduced for employed contributors whose employers do not contract out of the scheme on the grounds that comparable benefits, not liable to be forfeited on change of employment, are already available under an occupational scheme.¹ Contributors earning less than £9 a week will pay a minimum contribution, at less than the present rate, but will receive a flat rate, and not a graduated pension.

The minimum joint contribution will be 15s. 4d. a week for men and 13s. 6d. a week for women, compared with the present contributions of 18s. 2d. and 14s. 9d. respectively (see Table 7). On earnings above £9 and up to £15 a week, there will be graduated contributions of 8½ per cent of earnings, divided equally between employer and employee, running up to a maximum of 10s. 2d. a week for those earning £15 or more a week, in addition to the minimum contribution.

These contributions, besides qualifying for the present flat-rate national insurance and industrial injuries benefits, will earn additional retirement pension on the following scale: each £15 of graduated contributions paid by an employed man, with the matching £15 paid by his employer, will add one shilling a week to his standard pension of £2 10s. if he is single and £4 if he is married. For a woman, who becomes entitled to her pension five years earlier, each shilling unit will correspond to £18 of graduated contributions paid by her with the matching contributions from her employer.

The new system will not come into operation before April 1961.

¹ Occupational pension schemes, organised by employers and outside the National Insurance scheme, at present cover more than one-third of the working population, including half of the men.

Death Grant

A death grant of up to £25 is paid on the death of an adult, and a smaller sum on the death of a child, provided the required contribution conditions have been satisfied. Grants are not paid for persons who were already over pension age on 5th July, 1948. Reduced grants are paid on the deaths of men who were over 55 years of age and women who were over 50 on 5th July, 1948.

NATIONAL INSURANCE (INDUSTRIAL INJURIES)

The Industrial Injuries Insurance scheme, which replaced the Workmen's Compensation scheme in July 1948, provides benefits for personal injuries caused by accidents arising out of, and in the course of, employment, and for prescribed diseases due to the nature of employment. It covers practically everyone in class 1 of the National Insurance scheme and certain others. The relevant Acts are the National Insurance (Industrial Injuries) Acts, 1946 to 1957. Cover against industrial injuries and diseases in Northern Ireland is provided to the same extent by the separate legislation of the Parliament of Northern Ireland.

Benefits*Injury Benefit*

Injury benefit for an adult is 85s. a week plus 30s. for an adult dependant and 15s. for the first or only child under the family allowances age limits and 7s. for each other eligible child, in addition to any family allowance payable. It is paid when the insured person is incapable of work as a result of an industrial accident or disease, and payment can continue for a maximum of 26 weeks from the date of the accident or development of the disease.

Disablement Benefit

Disablement benefit may be paid when injury benefit stops. The amount depends on the extent of the disablement, as assessed by a medical board; it varies from 85s. for 100 per cent disablement to 17s. a week for 20 per cent disablement. For disablement of less than 20 per cent a gratuity is normally paid, ranging up to £280.

In the following circumstances disablement benefit may be increased:

1. It will be made up to the 100 per cent rate during in-patient treatment in a hospital for the relevant injury or disease, and increases for dependants may also be paid.
2. If benefit is being received at the 100 per cent rate and someone is needed to look after the insured person, a constant attendance allowance not exceeding 35s. a week (70s. in cases of exceptionally severe disablement) may be paid.
3. If the insured person is permanently unfit for work an unemployability supplement of 50s. a week may be paid, with allowances for dependants.
4. If the insured person is unfit to return to his former job, or work of a similar standard, benefit may be increased (subject to a maximum of 85s.) by a special hardship allowance of up to 34s. a week.

Death Benefit

If the accident or disease results in the insured person's death, death benefit is paid to the dependants.

For widows living with their husbands at the time of death, a pension of 70s. a week is payable for the first thirteen weeks of widowhood. Thereafter, if the widow

(1) is entitled to a child's allowance or was over the age of 40 on ceasing to be so entitled, or (2) was over 50 years of age, or was permanently incapable of self-support, at the time of her husband's death, or (3) is not entitled to child's allowance, but has residing with her a young person under the age of 18 who was in her late husband's family, or (4) is over 40 years of age when (3) ceases to apply, or (5) is pregnant by her late husband, she is entitled to a pension of 56s. a week. If none of these conditions is satisfied, the widow may receive a pension of 20s. a week.

In addition, allowances will be paid for children under the family allowances age limits. For widows, these allowances are normally at the rate of 20s. a week for the first or only child and 12s. a week for each other child. For other beneficiaries, the rate is 15s. and 7s. a week respectively.

Certain other dependants, such as parents and other relatives, are entitled to pensions, allowances or gratuities. The amounts vary with the closeness of the relationship and the extent to which the dependants were maintained by the deceased during his lifetime.

NATIONAL ASSISTANCE AND WELFARE SERVICES

The National Assistance Act, 1948, came into operation on 5th July, 1948. It provides a unified State service of financial assistance for those in need, replacing the various services of this kind provided in the past by the State and local authorities. As the residual service, National Assistance meets the financial needs of all those people who are unable to maintain themselves (for example, because they fall outside the scope of the other social security services) and it supplements the insurance benefits when they are insufficient.

The National Assistance Board is responsible for administering these weekly cash grants. It has various other duties, including the administration of non-contributory pensions under the Old Age Pensions Act, 1936 (still payable on a nationality, means and residence test to a diminishing number of persons aged 70 years or over and to blind persons aged 40 years or over, who do not receive pensions under the contributory scheme); the administration of hostels provided under the Polish Resettlement Act, 1947; and the determination (under the Legal Aid and Advice Act, 1949, and the Legal Aid and Solicitors (Scotland) Act, 1949) whether a person's resources bring him within the Legal Aid Scheme and, if so, what, if anything, is the maximum amount he may be called upon to pay towards the cost of his case.¹

The National Assistance Board is responsible for influencing 'persons without a settled way of living' to lead a more normal life. It provides temporary accommodation for such persons, usually through the agency of local authorities. The board also runs two re-establishment centres for men who have become demoralised by long unemployment and who are in receipt of national assistance grants or are resorting to reception centres.

The provision under the National Assistance Act of residential accommodation for the aged, infirm and others, of temporary shelter for persons who lose their homes, and of special welfare services for the blind, the deaf, the crippled and other handicapped persons is the responsibility not of the National Assistance Board but of county and county borough councils in England and Wales and, in Scotland, of councils of counties and large burghs.

In Northern Ireland, financial assistance to persons in need is given under the provisions of the National Assistance Act (Northern Ireland), 1948, and there is

¹ For further information on legal aid see pp. 89-91.

also a system of non-contributory pensions similar to that operating in Great Britain. Under the Welfare Services Act (Northern Ireland), 1949, local authorities, in their capacity as welfare authorities, provide residential accommodation for aged, infirm and other persons in need of care and attention. The welfare authorities also provide special services for the blind, deaf and other handicapped persons.

Welfare Services for the Blind and the Disabled

All local welfare authorities provide services for the blind, either directly or through voluntary organisations acting as their agents. Most authorities are providing, or are arranging for, welfare services for the deaf and other handicapped persons; voluntary organisations also play an important part in this work by supplementing local authority services.

Services for the blind include a home visiting and teaching service, employing qualified home teachers, to assist the blind to adjust themselves to their blindness (special attention is given to the newly blind and to those with more than one disability, such as deaf-blind persons); instruction in craft work and in the use of embossed letters for reading and writing; social clubs, holiday and other recreational facilities; the supply or loan of apparatus, such as wireless sets, embossed and recorded books, adapted tools and games; residential social rehabilitation and placement in employment; and an advisory service on the special financial and other benefits available to the blind (including preventive and medical treatment, special education, and training for employment). Voluntary organisations for blind welfare include the local societies and also national bodies, notably the Royal National Institute for the Blind, the National Library for the Blind, St. Dunstan's (for those blinded in the wars), the Scottish National Federation for the Welfare of the Blind and the Scottish National Institution for the War Blinded.

Welfare services for the blind are well established and progress is being made with similar services for other severely and permanently disabled persons. The teaching of handicrafts, the organisation of social centres, clubs and other social activities, the adaptation of premises to meet individual disabilities, and the arrangement of holidays, are some of the services most generally provided. Local authorities are required to keep, in their areas, registers of the blind and of other physically handicapped persons who wish to register.

Old People's Welfare

The newer homes provided by local authorities for aged and other infirm persons usually have accommodation for 25 to 40 residents; over a thousand have been opened in Great Britain since the end of the second world war. County welfare authorities in Northern Ireland have provided over 20 similar homes. These smaller homes are gradually replacing the larger institutions which were previously maintained by local authorities. There are also about 1,800 small homes for old people run by voluntary bodies or by private individuals. Most of the 850 voluntary homes have been established since the second world war, usually with the assistance of grants from public funds.

A number of home services for old people are provided by statutory and voluntary bodies with the object of enabling old people to continue to live in their own homes for as long as possible. Local health authorities supply, under the National Health Service, home nursing and domestic help (see p. 153); over half the district nurses' time is spent on the aged or the chronic sick and the same group makes the heaviest demands on the home help service.

Local authorities are enabled by the National Assistance Act to contribute to the funds of voluntary organisations 'whose activities consist in or include the

provision of recreation or meals for old people'. Some 7,000 social clubs for elderly people have been started by voluntary effort in recent years in all parts of Britain. Other voluntary welfare services for old people include 'meals-on-wheels' (cooked meals delivered to their homes), the organisation of regular friendly visiting, holidays, chiropody services, and laundry services.

Local Old People's Welfare Committees have been formed by those concerned in this work, and are aided by the National Old People's Welfare Council, an associated group of the National Council of Social Service widely representative of voluntary and statutory bodies having direct contact with old people, or by the Scottish Old People's Welfare Committee, a committee of the Scottish Council of Social Service. A National Corporation for the Care of Old People was established in 1947 by the Nuffield Foundation¹ to stimulate and to give financial support to schemes for the welfare of the aged, to maintain an expert technical advisory service, and to encourage and to undertake research and experiment for the welfare of old people. The corporation is now concentrating its main effort on home services for old people. The King George VI Foundation, financed from the fund raised in memory of the late King, has spent nearly £600,000 on schemes for old people. The foundation's aid to old people's welfare has taken three forms: grants for the development of existing clubs for old people, the establishment of new clubs, and the training of workers to help old people.

CARE OF CHILDREN DEPRIVED OF NORMAL HOME LIFE

The Children Act, 1948, which came into force with the ending of the Poor Law, places upon local authorities in Great Britain a duty to receive into their care any child under the age of 17 who has no parent or guardian, or who has been abandoned or whose parents are unable to provide for him temporarily or permanently. Local authorities must keep a child in care until he is 18 years of age or until he no longer requires it. Under the Children and Young Persons Acts, 1933-52, as regards England and Wales, and under the Children and Young Persons (Scotland) Acts, 1937 and 1956, local authorities are required also to accept children committed to their care, until the age of 18, by juvenile courts, as needing care or protection. Both categories of children are to be treated so as to further their best interests and to afford them opportunity for the proper development of their characters and interests.

Children in care are, if possible, boarded out with foster parents, who receive an allowance to cover the cost of maintenance. If a foster home cannot be found, a child may be placed in a children's home managed by a local authority or a voluntary organisation. Many children's homes are now provided in small houses, on housing estates or in ordinary streets, where a group of ten or fewer children live in the care of a housemother or houseparents, the husband following his normal employment. Other children may be placed in hostels or lodgings or in other accommodation specially suited to their needs. The desirability of returning a child to his family circle as soon as possible is fully appreciated, and work is carried out to rehabilitate the family where this is necessary.

To carry out their functions under the Children Act, each local authority (county council and county borough council or, in Scotland, council of a large burgh) is

¹ The Nuffield Foundation was established by Lord Nuffield in 1943 for the advancement of health and the prevention and relief of sickness; the advancement of social well-being; the care and comfort of the aged poor; the advancement of education; and such other charitable purposes as might be declared by Lord Nuffield in his lifetime and by the trustees after his death. Prominent among the foundation's many activities are the promotion of medical, scientific and social research and the development of medical services and of technical and commercial education. Its resources consist of a fund of £10 million provided by Lord Nuffield and of gifts and bequests from other persons.

required to appoint a children's committee and a children's officer to be responsible for the care and upbringing of children in the authority's care. Children's officers are assisted by a staff of child care officers who undertake inquiries and who supervise children placed in foster homes. Regulations for England and Wales safeguarding the boarding out of children by local authorities and voluntary organisations and the conduct of children's homes have been made by the Home Secretary. The Secretary of State for Scotland is the responsible minister in Scotland.

In Northern Ireland, the Children and Young Persons Act (Northern Ireland), 1950, gave to the welfare authorities of each county and county borough (under the general direction of the Ministry of Home Affairs) the duty of caring for homeless and neglected children. Legislation relating to children and arrangements for their care follow the same general principles as in Great Britain.

War orphans are the responsibility of the Ministry of Pensions and National Insurance, see p. 144.

Voluntary organisations, many of which were pioneers in child care, continue to play a valuable part in this work. The larger societies, such as Dr. Barnardo's, the Church of England Children's Society and the Catholic Child Welfare Council, are constituent societies of the National Council of Associated Children's Homes, to which a large number of smaller voluntary homes are also affiliated. In Scotland, a valuable contribution is also made by the Children's Homes and Hostels under the auspices of the Church of Scotland Committee on Social Service, and by other voluntary organisations, including the Quarriers' Home (formerly the Orphans' Homes of Scotland).

Children's homes provided by voluntary organisations (there are about 660 such homes in Great Britain and 23 in Northern Ireland) are required to be registered under the Children Act (in Northern Ireland under the Children and Young Persons Act). The boarding out of children and all children's homes in Great Britain, whether local authority or voluntary homes, are subject to inspection by Inspectors of the Home Office Children's Department, of the Scottish Home Department or of the Northern Ireland Ministry of Home Affairs.

The cost of the local authorities' child care service, including the provision of training for houseparents and child care officers, is shared between the local authorities and the Exchequer.

The practice of adoption, for which legal provision was first made in England and Wales in 1926 and in Scotland in 1930, has considerably increased during recent years. Over 14,000 adoption orders are made annually in Great Britain; there are always more would-be adopters than children available for adoption. Adoption is now regulated by the Adoption Act, 1958, in Great Britain and by the Adoption of Children Act (Northern Ireland), 1950, in Northern Ireland. The Registrars General keep registers of adopted children; adoption societies (there are over 60 societies which arrange adoptions) must be registered with the local authority (in Northern Ireland with the Ministry of Home Affairs).

To safeguard the welfare of children living with their own parents or guardians, the children's departments have a duty to cause inquiries to be made in any case in which it is reported that a child may need care or protection, unless they are satisfied that such inquiries are unnecessary. In addition, local authorities, at the request of the Government departments concerned, have appointed local committees to co-ordinate local authority and voluntary services dealing with unsatisfactory families; one of their officers is designated as co-ordinating officer for the purpose of calling meetings of interested bodies to discuss particular 'problem families' and to decide on a course of action. Local health authorities have wide powers under the National Health Service Act to make arrangements for the prevention

of illness, and for care and after-care; these arrangements enable preventive and remedial measures to be taken to safeguard the physical and mental health of the children of problem families. These problem families, a very small minority in the community, are the focus of much attention from health, housing, education, children's and welfare authorities and voluntary bodies. The voluntary Family Service Units undertake intensive and prolonged casework with such families and there are several voluntary recuperative centres to which mothers, with their children, can be sent for a period of residential training, sometimes as a condition of a probation order. The old-established National Society for the Prevention of Cruelty to Children and its Scottish counterpart maintain inspectors and visitors for the investigation of cases of reported cruelty to, or neglect of, children in their own homes; when necessary they resort to law for the protection of such children, but they prefer to achieve their purpose by warning and advice.

WAR PENSIONS AND RELATED SERVICES

Pensions to persons disabled or bereaved through the wars are paid under Royal Warrants and other instruments administered throughout the United Kingdom by the Ministry of Pensions and National Insurance (see pp. 56-7).

The current basic pension for 100 per cent disablement for a private soldier is 85s. a week, but the amount varies according to rank and the degree of disablement. The latter is assessed by comparing the disabled person with a normal healthy person of the same age and sex, without taking earning capacity into account. Allowances for a wife and children are paid in addition to the basic pension and there are various supplementary allowances, the main ones being for unemployment (55s. a week), constant attendance (up to 35s. and, exceptionally, 70s. a week), comforts (10s. or 20s. a week), and lowered standard of occupation (up to 34s. a week). There is an allowance (at rates varying between 5s. and 15s. a week) for persons drawing disablement pensions who are aged 65 or over and whose assessment is 40 per cent or more.

Both the basic disablement pension and the supplementary payments are free of income tax, and children's allowances are paid in addition to any allowance payable under the Family Allowances Acts.

War pensioners have priority (except over more urgent cases) for treatment of their war disabilities in National Health Service hospitals.

Pensions are paid to war orphans and to war widows. The standard rate of pension for war widows of private soldiers is 66s. a week, an addition being made for higher rank, and they also receive allowances for their children (25s. for each child), and, in certain cases, an allowance for rent (up to 25s. a week). Widows over 70 years of age receive an extra 10s. a week. Parents or other relatives who were dependent on a person whose death resulted from the wars may receive pensions if they are in financial need.

The Ministry of Pensions and National Insurance maintains a welfare service for war pensioners, with a special branch for war orphans.

Many voluntary associations, such as the British Legion and other ex-Service organisations, give financial aid and personal service to disabled ex-Service men and women and their families. The ministry and these bodies work in co-operation.

HEALTH

The concern of the State with the nation's health is chiefly a development of the years since the passing of the Public Health Act of 1848. The second half of the

nineteenth century saw the growth of the environmental or public health services, such as provision of pure water, sewerage, disposal of refuse and cleaning of streets, and also building by-laws and other measures designed to promote healthy living conditions in Britain. Local authorities provided hospitals for smallpox and other infectious diseases and poor law infirmaries in the nineteenth century, but the major hospital and medical services remained in the hands of voluntary hospitals and private practitioners until the twentieth century. This century has seen the main development of publicly provided personal health services, as distinct from environmental services. The medical benefit introduced under the National Insurance Act of 1911 was the first step in the provision of a State-aided general practitioner service outside the Poor Law. The early years of the century were notable for the development of maternity and child welfare and measures for the prevention and treatment of tuberculosis; there was also progressive development in the hospital services provided by local authorities until these were absorbed in the National Health Service created in 1948.

Over the past forty years advances have been made in many directions: medical research, discovery of important new drugs, blood transfusion, control and treatment of venereal disease, and research into diet. The second world war served to emphasise the importance of a sound diet and as a result the Welfare Foods Service for expectant and nursing mothers and young children was introduced, and the School Meals Service and industrial canteens were expanded. War also stimulated developments in industrial health services and in the rehabilitation of the disabled. Scientific discoveries and improved services are reflected in declining mortality rates and improved physique.

PUBLIC HEALTH

The Public Health Act of 1936 brought up to date and consolidated preceding Acts; it constitutes the present basic public health code in England and Wales. Local authorities are mainly responsible for its implementation and they have extensive powers for the making and administration of by-laws relating to matters of public health. The local authorities chiefly concerned are the councils of county and non-county boroughs, urban and rural district councils, and, to a limited extent, parish councils. Local authorities also have power to secure clean air by establishing smoke control areas (see p. 300).

Public health services in Scotland and in Northern Ireland have developed on much the same lines as in England and Wales, although they are based on separate Acts and there is a different allocation of services as between the various types of local authority. The Public Health (Scotland) Act, 1897, and the Burgh Police (Scotland) Act, 1892, constitute the basic legislation for Scotland. The local authorities concerned are the councils of counties and burghs. In Northern Ireland, the councils of county and non-county boroughs and urban and rural district councils are mainly responsible for administering the Public Health Acts (Northern Ireland), 1878-1955.

Control of Infectious Diseases

Local authorities are responsible to the Minister of Health (or the Secretary of State for Scotland or the Ministry of Health and Local Government for Northern Ireland) for recording notifications of the prescribed infectious diseases; they are also responsible for the investigation by the Medical Officer of Health of outbreaks of infectious diseases, and for disinfection and other measures advised by him for preventing the spread of infectious diseases in the area.

The same ministers have a general responsibility for supervising the operation of health control at seaports and airports, the primary object of which is to prevent the introduction of infectious disease into the country. This health control is undertaken by health authorities using the services of medical officers, public health inspectors, rodent inspectors and others.

Pure Food

The purity, hygiene and description of food are controlled by legislation now consolidated for England and Wales in the Food and Drugs Act, 1955, for Scotland in the Food and Drugs (Scotland) Act, 1956, and for Northern Ireland in the Food and Drugs Act (Northern Ireland), 1958. In England and Wales, the Act and regulations made under it are, in general, carried out and enforced by food and drugs authorities (i.e. county councils, county borough councils and, generally, the larger borough and urban district councils) in relation to composition, adulteration and description, and by local authorities (i.e. county borough, borough, urban district and rural district councils) in relation to purity and hygiene; the Ministry of Health and the Ministry of Agriculture, Fisheries and Food are the central departments responsible for advising and for making regulations under the Act. Premises where food for sale for human consumption is prepared, sold or stored are required to conform to certain hygienic standards. Authorised officers of food and drugs authorities and of local authorities are empowered to take samples of any food for sale for human consumption, for analysis or for bacteriological or other examination. Special regulations are in force for certain foods such as milk, meat and ice-cream.

In Scotland, the local authorities chiefly concerned are the councils of counties and large burghs; the central department is the Department of Health for Scotland.

In Northern Ireland, administration is in the hands of the county and county borough health authorities, the central department being the Ministry of Health and Local Government.

THE NATIONAL HEALTH SERVICE

The National Health Service was established in 1948. The relevant Acts, the National Health Service Act, 1946, the National Health Service (Scotland) Act, 1947, and the Health Services Act (Northern Ireland), 1948, came into force simultaneously on 5th July, 1948.

The National Health Service Act, 1946, aims 'to promote the establishment in England and Wales of a comprehensive health service designed to secure improvement in the physical and mental health of the people of England and Wales and the prevention, diagnosis and treatment of illness, and for that purpose to provide or secure the effective provision of services'. The National Health Service (Amendment) Act, 1949, and the National Health Service Acts, 1951 and 1952, make some modifications in the scheme for Great Britain and provide for charges to be made for certain parts of the service, which is otherwise available free of charge to all according to medical need without regard to any insurance qualification, although all national insurance contributors are required to pay a separate weekly national health contribution under the National Health Service Contribution Acts, 1957-58.

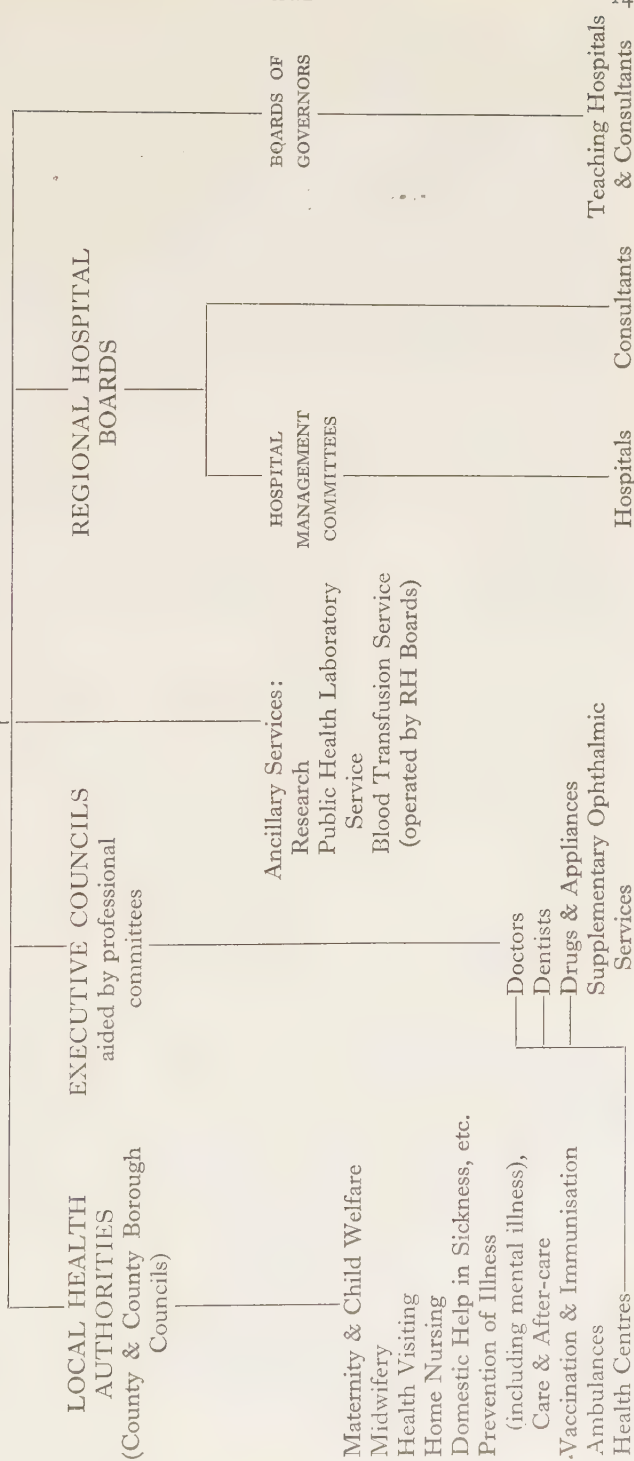
Health Service Administration in Great Britain

In England and Wales the Minister of Health has direct responsibility for (1) the provision on a national basis of all hospital and specialist services, including those for mental disorder, (2) the conduct of research work into matters relating to the causa-

ORGANISATION OF THE NATIONAL HEALTH SERVICE IN ENGLAND AND WALES

PARLIAMENT

MINISTER OF HEALTH — HEALTH SERVICES COUNCIL
(advisory)



tion, prevention, diagnosis or treatment of illness or mental defect, (3) a public health laboratory service, and (4) a blood transfusion service. He has indirect responsibility for the general practitioner services and local health authority services. He is advised by the Central Health Services Council and by standing advisory committees on various aspects of the service.

The hospital and specialist services are administered through regional hospital boards and hospital management committees or, in the case of teaching hospitals, by boards of governors. The hospitals themselves have been grouped into administrative units; these consist sometimes of several formerly independent hospitals and sometimes of one. There are nearly 400 such groups under the control of hospital management committees, which are in turn under the control of 15 regional hospital boards. The regions are arranged so that the hospital and specialist services can conveniently be associated with a university having a school of medicine.

The members of the hospital management committees are appointed by the regional hospital board. The committees, by their constitution, reflect the communities concerned, for they usually include not only medical practitioners but members of local authorities, trade unionists and others. The regional hospital boards are appointed by the Minister of Health and are similarly constituted. The term of office is three years, one-third of the board or committee retiring each year but being eligible for reappointment. The boards of governors of teaching hospitals are appointed by the minister, a proportion of the members being nominated by the teaching faculty of the university, the regional hospital board and the medical staff. All appointments to hospital management committees, regional hospital boards and boards of governors are honorary.

Medical and dental schools are not under the control of the minister; but it is his responsibility to provide clinical facilities for the training of medical students. The universities are responsible for the provision of teaching.

The administration of the general medical, dental, pharmaceutical and optical services is in the hands of 138 executive councils, each covering the area of a county or county borough. In a few cases, two areas are combined under one council. Each council has an ophthalmic services committee responsible for administering the supplementary ophthalmic service. Doctors, dentists and pharmacists are represented on the executive councils and each profession also forms a local committee. Councils of counties and county boroughs are the 146 local health authorities in charge of local health services.

In Scotland, the Secretary of State for Scotland is the responsible minister; 31 county councils and 24 town councils of large burghs are the local health authorities; hospital and specialist services are administered by five regional hospital boards appointed by the Secretary of State, assisted by 83 boards of management (the equivalent of hospital management committees in England); and there are 25 executive councils, each serving the area of one or more local health authorities. The teaching hospitals in Scotland come under the control of the regional hospital boards, but special medical education committees consider matters relating to medical teaching. The Scottish Health Services Council and its standing advisory committees advise the Secretary of State and keep closely in touch with the Central Health Services Council on common issues.

The Northern Ireland Health Services are described separately on page 155.

Health Service Finance

Annual expenditure on the National Health Service in the United Kingdom amounts to nearly $3\frac{1}{2}$ per cent of the total national income. The greater part of the cost falls on the Exchequer, to be met from general taxation, and a small part is

met from local rates. Other income is derived from the national health contribution paid with the national insurance contribution and from the payments for those parts of the service for which charges are made.

To help to limit expenditure without reducing the services offered, it was found necessary in 1951 and again in 1952 to introduce charges for certain items. There is a charge of 1s. for each item entered on a prescription form, and charges are also made for dentures and spectacles (except children's spectacles in standard frames), for elastic hosiery supplied in the family doctor service or hospital out-patients' department, for certain appliances supplied to out-patients, for treatment in the dental service (but not for examination only or for treatment given to persons aged under 21 years or to nursing or expectant mothers), and for some local health authority services. Certain exemptions or refunds are made and anyone may apply to the National Assistance Board for help in meeting any of these charges. Under the 1946 Act, a limited number of beds may be put aside for hospital patients wishing for privacy, provided that this accommodation is not needed on medical grounds for non-paying patients. Charges for these 'amenity' beds are fixed by statutory regulations. Provision is also made at certain hospitals for patients who wish to occupy private patients' accommodation on payment of the whole cost of this accommodation and treatment. Such patients may make private arrangements for treatment by a doctor of their own choice.

Hospital medical staffs are either full-time and salaried or part-time; part-time medical officers are usually paid on a sessional basis and are free to accept private patients. General medical practitioners in public service are remunerated mainly by capitation fees according to the number of persons on their lists.

Dentists providing treatment in their own surgeries are paid on a prescribed scale of fees according to the treatment they have carried out. Pharmacists dispensing on their own premises are paid on the basis of the prescriptions they dispense. Doctors and ophthalmic opticians taking part in the supplementary ophthalmic service are paid prescribed fees for each sight test made; opticians who dispense spectacles are paid according to the number of pairs supplied.

A committee set up to review the cost of the health service found no scope for recommendations which would either produce new sources of income or reduce substantially the annual cost of the service. It found that the real cost of the service, after allowing for rising prices, had increased little during the years 1949-54, while many of the services provided were substantially expanded and improved.¹

The General Practitioner Services

The general practitioner services cover the medical attention given to individuals by doctors and dentists of their own choice, from among those enrolled in the service. Doctors and dentists normally work at their own surgeries; in a few places they practise in health centres established under the National Health Service Acts. About 25,000, or almost all, general medical practitioners (principals and assistants) in Great Britain take some part in the service.

Doctors previously in practice were entitled to join the service at its start in the place where they were practising. Those now wishing to enter practice have to apply through their executive councils to the central Medical Practices Committee, so that a better distribution of doctors throughout the country may be facilitated. The maximum number of patients' names permitted to be on a family doctor's list is normally 3,500; the average number in England and Wales is about 2,200. It is

¹ Report of the Committee of Enquiry into the Cost of the National Health Service, *Cmd.* 9663, January 1956.

normally through the patient's own doctor that access to most other parts of the health service is obtained.

Of about 11,200 dentists in England and Wales available for general practice, about 10,200 are in the service, and in Scotland 1,090 dentists (practically all those in general practice) are in the general dental service.

Over 900 ophthalmic medical practitioners and over 7,000 ophthalmic and dispensing opticians in England and Wales, and 70 ophthalmic medical practitioners and 900 ophthalmic and dispensing opticians in Scotland, are engaged in the supplementary ophthalmic service. This service provides for the testing of sight and provision of spectacles. Cases requiring treatment are dealt with through the hospital eye service.

Almost all chemists (nearly 16,000 in England and Wales and 2,600 in Scotland) are taking part in the service.

Hospital and Specialist Services

The hospital and specialist services include the provision of consultants; hospitals of all kinds including maternity accommodation, tuberculosis sanatoria, mental hospitals and institutions for the mentally defective, infectious-disease units, convalescent homes and rehabilitation centres; and all forms of specialised treatment.

In the service in England and Wales there are nearly 3,000 hospitals (including teaching hospitals) with over 500,000 available beds and a nursing and midwifery staff of over 150,000 full-time and over 40,000 part-time nurses. In Scotland, there are 400 hospitals with nearly 67,000 beds and some 22,000 full-time and 5,000 part-time nurses and midwives. A small number of hospitals remain outside the service for special reasons. Most of these are run by Religious Orders; some, such as the Italian and French hospitals, serve a special group of persons, and others are maintained for the chronic sick or for convalescents by charitable organisations. There are also private nursing homes, which must be registered.

An expanded programme of new hospital building and capital improvements in existing hospitals, begun in 1956, is proceeding on an ever increasing scale.

Teaching Hospitals

The 26 London teaching hospitals are in fact groups of hospitals, and include about 100 hospitals, convalescent homes, branches, annexes or treatment centres. The 10 teaching hospitals elsewhere in England or in Wales cover some 70 hospitals and other establishments.

Rehabilitation

The importance of rehabilitation as a facet of medical treatment is firmly established and, today, hospital treatment is not limited to the relief of pain, or alleviation or cure of pathological conditions, but aims to restore the individual's functional capacity without delay. Special rehabilitation facilities are provided, for those requiring them, in the departments of physical medicine and occupational therapy at the main hospitals, and in a few special rehabilitation centres which are not attached to any hospital. The work is carried out under the guidance of the appropriate medical specialist by physiotherapists, remedial gymnasts, occupational therapists and social workers, working as a team. Experience has shown that efficient medical rehabilitation reduces the stay in hospital, the incidence of permanent disability and the period of incapacity for full work. The departments work in close association with the Disablement Resettlement Service of the Ministry of Labour and National Service. Rehabilitation methods have been applied with advantage in the care of the chronic sick, the aged and the handicapped and have enabled

many patients to become self-sufficient or to be discharged from hospital and to resume an independent life in their own homes.

Blood Transfusion

The National Blood Transfusion Service is administered by the regional hospital boards under the National Health Service. Each region maintains an organisation for collecting blood within the region. Voluntary donors, recruited from the public, give their blood without payment. It is kept in the regional blood bank, or issued to area blood banks maintained at general hospitals in each region. There are two central laboratories administered by the Medical Research Council on behalf of the Ministry of Health: the Blood Group Reference Laboratory, which prepares grouping serum and investigates blood grouping problems referred to it, and the Blood Products Laboratory, which prepares dried plasma and plasma fractions.

Medical and Psychiatric Social Work

There are over 1,000 trained almoners working in Britain; the majority work in hospitals, others in local authority services or elsewhere. The almoner co-operates with the medical staff in the investigation and treatment of disease by elucidating and adjusting social and economic factors which contribute to a patient's disability or impede his restoration to health. Psychiatric workers are specially trained for work in the mental health services and in child guidance clinics. They are an invaluable complement to doctors, not only in mental and mental deficiency hospitals but also in the local health and education services, in assessing the environmental factors in mental abnormalities and in helping patients to make the necessary adjustments.

Mental Health Services

Persons who are suffering from mental illness can consult the family doctor and receive specialist advice at hospital out-patient clinics in the ordinary way. In England and Wales, the treatment of mental disorder is regulated by the Mental Health Act, 1959. Persons who need to enter a hospital for mental treatment, whether a general or a mental hospital, can do so as voluntary patients with no special formality. If patients, or their relatives, are unable or unwilling to make the necessary arrangements for admission to a mental hospital, it is the duty of a duly authorised officer of the local health authority to do so. Where necessary in the interests of society or of the patients themselves, mental patients can be compulsorily detained in hospital. There are procedural safeguards to protect the patient from unnecessary detention and he, or his relatives, may appeal against detention to a mental health tribunal. The local health authority is expected to offer a welfare service to the mentally ill, either before admission or to help their rehabilitation on discharge.

Local health authorities have a duty to ascertain mental defectives in the community, to supervise them and to provide, where practicable, suitable training or occupation. This is given in occupation centres where the defectives attend daily, as at school, or by home teaching. If supervision affords insufficient protection, it is the duty of officers of the local health authority to take the initial steps to place such defectives under guardianship within the community or to arrange for their admission to a mental deficiency hospital.

Local Health Services

The Local Health Services administered by the county and county borough councils (in Scotland, county and large burgh councils) include those for maternity and child welfare (but not hospitals and maternity homes), domiciliary midwifery,

health visiting, home nursing, the provision of domestic help (in such circumstances as sickness, confinement or old age), the ambulance service (in Scotland, the responsibility of the Secretary of State), the prevention of illness and the care and after-care of the sick (including the mentally ill and also the mentally defective), vaccination and immunisation, and the establishment and maintenance of local health centres (in Scotland, the responsibility of the Secretary of State).

Welfare Centres

Maternity and child welfare centres have existed for many years. They are part of the advisory and preventive services of the local health authority; they offer regular supervision by nurses and doctors to expectant and nursing mothers and young children. Special sessions for test feeding and for remedial exercises are held at some centres, and a feature of the service is the education of mothers by means of talks, discussion groups, demonstrations and classes. Practically all centres are distribution points for the national dried milk and vitamin preparations provided for expectant mothers and young children (see below). In England and Wales more than 75 per cent of all babies are taken to the centres.

Maternal Care

According to the advice given by the doctor or midwife or her own preference, the expectant mother may arrange to have her baby at home or in hospital; in allocating hospital beds, priority is given to those for whom domiciliary confinement is inadvisable for medical or obstetric reasons or because of adverse home conditions. The proportion of confinements taking place in hospital varies considerably between different areas; the national average has increased continuously over the past 25 years and, for England and Wales, is now 65 per cent. The departmental committee, which reported in February 1959 on the maternity services in England and Wales, recommended that the hospital service should make provision for 70 per cent of all confinements, which is the actual present proportion of hospital confinements in Scotland. Local needs will continue to vary within this average.

For a home confinement, every mother can call upon the services of either a general practitioner obstetrician or her own family doctor if he is willing to undertake her maternity care, besides those of a trained midwife in the domiciliary service of the local health authority. The doctor carries out certain ante-natal and post-natal examinations, attends at the confinement if he thinks it necessary, and gives any other medical care required. The services of a consultant obstetrician are also available if the doctor seeks his advice. Routine supervision and advice is given by the midwife, who visits regularly before the confinement to examine, advise and help the mother. The expectant mother may attend the ante-natal clinic for instruction in preparation for motherhood and in some cases for interim ante-natal supervision. The midwife delivers the patient (unless the doctor considers it necessary to be present) and continues in attendance for the first 14 days after the birth. Midwives work in close touch with the welfare centres in the care of the mother both before and after the birth of the child.

Welfare Foods Service

Local health authorities distribute the welfare foods, other than liquid milk, that the Welfare Foods Service¹ provides for expectant and nursing mothers and young

¹ The service began as a war-time measure with the National Milk Scheme in 1940, but in 1946 the Government decided to continue the extended scheme as part of the peace-time social services. Beneficiaries now obtain the necessary tokens from the Ministry of Pensions and National Insurance.

children at a low cost or free of charge. These foods are national dried milk as an alternative to liquid milk¹ and at an equivalent price; orange juice, at 5d. a six-fluid-ounce bottle, for expectant mothers and children under two; cod liver oil, free of charge, for expectant mothers and children under five; vitamin A and D tablets, free of charge for expectant mothers as an alternative to cod liver oil, and also for mothers for 30 weeks after confinement. These supplies of milk and orange juice are provided free of charge if the families cannot afford to pay.

Other Maternity and Child Welfare Services

Many local health authorities make special arrangements for premature babies remaining in their own homes, by lending equipment and appointing experienced nursing staff to supervise their care.

There are some 550 day nurseries for children under five in Great Britain provided by local health authorities or voluntary associations working with them. The National Health Service Act, 1952, gave local authorities power to make charges for the use of day nurseries. Private or factory nurseries (of which there are about 460 altogether) must be registered with the local health authorities; this regulation applies also to persons who mind for payment more than two children, not all of the same family.

Most local authorities contribute to the cost of the work done by voluntary denominational and other bodies which care for unmarried mothers and their babies; a few authorities make direct provision for their special needs through their health departments. The voluntary associations for moral welfare employ specially trained workers to help the unmarried mother in making plans for herself and her child. Most homes and hostels for the ante-natal and post-natal care (and, in some cases, the confinement) of these mothers are provided by such organisations.

Health Visiting

Health visitors are State Registered Nurses, with at least six months' training in midwifery, who have had special training in health visiting. They are employed by local health authorities to visit people in their own homes to give advice on the care of young children, expectant and nursing mothers, persons suffering from illness, including mental illness, and any injury or disability requiring medical or dental treatment, and on measures necessary to prevent the spread of infection. Their duties include health education and attendance at ante-natal and child welfare clinics. They may also undertake tuberculosis visiting and school nursing.

Home Nursing

The employment of nurses to attend persons who require nursing in their own homes is the responsibility of the local health authorities. Although many authorities employ nurses directly for this purpose, others have arranged for voluntary district nursing associations to provide a service on their behalf.

Domestic Help

Local health authorities have the power to make arrangements for domestic help (or, as it is more commonly called, home help) in households where it is needed owing to illness, confinement, or the presence of children, old people or

¹ The liquid milk allowance (which is obtained through the usual retail channels) is one pint a day at 4d. a pint for expectant mothers, children under five years of age, and children of five years or more but under sixteen years who are physically and mentally handicapped and who are unable to attend school or an occupation centre (where they would receive milk).

mental defectives. This service is mainly used in the care of old people, in maternity cases and, increasingly, for families where such help is needed, for example, during the absence of the mother, to prevent children having to be cared for away from home. Home help is not one of the free services, and authorities are authorised to recover from those assisted such charges as the authorities consider reasonable, having regard to the person's means.

Ambulance Services

Free conveyance by ambulance between home and hospital or clinic is provided where necessary, either directly by local health authorities or, on their behalf, by voluntary organisations. The Hospital Car Service (organised by the St. John Ambulance Brigade, the British Red Cross Society, and the Women's Voluntary Services) supplies special transport in many areas for patients needing it who are not stretcher cases; such patients are conveyed in private cars whose owners volunteer to give this service, and the authorities make a mileage payment to cover expenses. In Scotland, ambulances are run by the Scottish Ambulance Service (St. Andrew's Ambulance Association and the Scottish branch of the British Red Cross Society) on behalf of the Secretary of State.

Prevention of Illness: Care and After-Care

Measures for the prevention of tuberculosis, e.g., the tracing of sources of infection, the prevention of its spread, and the removal of the cause of infection, are the responsibility of all local health authorities. Facilities for diagnosis and treatment are the responsibility of the hospital service and are provided through sanatoria and chest clinics. The chest physicians staffing these clinics are often employed jointly by the hospital authorities and local health authorities, to ensure that diagnosis and treatment are properly co-ordinated with prevention and after-care. Among the duties of these officers are those of making recommendations for residential treatment, visiting the homes of patients, and examining and advising 'contacts'. They are assisted in this work by tuberculosis health visitors and nurses and, in most areas in England and Wales, by almoners or other chest clinic social workers. Most local health authorities have statutory or voluntary tuberculosis care committees.

Mass miniature radiography was introduced in 1943 as a means of early diagnosis of tuberculosis. About 75 units now operate under the regional hospital boards in England and Wales, in close co-operation with local health authorities; there are 10 units in Scotland. They examine nearly four million persons a year, concentrating increasingly on areas with a bad record for tuberculosis, on specially susceptible groups in the population, and on adults in regular contact with organised groups of children.

Care and after-care of patients is supplemented by general advice and assistance to the households in which they live. Local health authorities send suitable patients to the village settlements for tuberculous persons which are run by voluntary bodies or by local health authorities of other areas; training for employment is carried out in conjunction with the training and resettlement schemes of the Ministry of Labour and National Service.

Care and after-care arrangements are made by all local health authorities for other types of illness, including mental illness or mental defectiveness. A chiropody service may be included in these arrangements.

As part of their preventive work, local health authorities give help and advice to families which may be in difficulties and in danger of breaking up.

A charge may be made for some of these services, if the person wishing to make use of them can reasonably be expected to contribute towards their cost.

Vaccination and Immunisation

Arrangements for vaccination against smallpox and immunisation against diphtheria, without charge, as part of the National Health Service, are made by all local health authorities; in addition, most local health authorities have similar arrangements for immunisation against whooping cough, and some provide for immunisation against tetanus. In 1958 there were only eight deaths from diphtheria in England and Wales, as against 2,641 in 1941, and in Scotland, none as against 517 in 1941.

Vaccination against poliomyelitis, which was introduced for children in 1956 and made available to some adults in 1957, was extended in 1958 to all persons up to the age of 25 years as well as to certain others. BCG vaccination against tuberculosis is available to certain adults and children.

Health Centres

A few health centres have been established to provide facilities for several services under one roof; they differ widely in size and character according to local need. Experience shows that they are likely to be most successful in areas of housing development where new services are needed. The need to observe the working of the experimental centres already set up and to conserve scarce resources is likely to prevent any general expansion of the service in the near future. In Scotland, the provision of health centres is not the responsibility of local health authorities but of the Secretary of State for Scotland.

HEALTH SERVICES IN NORTHERN IRELAND

In Northern Ireland, the historical development of the health services has taken broadly the same course as in other parts of the United Kingdom, and the health services established under the Health Services Act (Northern Ireland), 1948, correspond fairly closely to the medical care system established under the National Health Service in Great Britain. The essential principle is that the same range of services shall be available to citizens in Northern Ireland as in England, Wales and Scotland. The services in Northern Ireland are financed as in the rest of the United Kingdom.

In hospital administration the role of the central Government is not quite so immediate or direct as in Great Britain: hospital property, for example, is vested not in the Minister of Health and Local Government but in the Northern Ireland Hospitals Authority. The Hospitals Authority has under its control 64 hospitals and three special care institutions containing in all about 15,000 beds.

The tuberculosis service was established in 1947, a little earlier than the main hospital service. There are seven hospitals in Northern Ireland for the treatment of tuberculosis.

Vaccination against smallpox is compulsory in Northern Ireland but otherwise the range of preventive and domiciliary services is similar to that existing in Great Britain. Domestic help (whole-time or part-time) for aged or handicapped persons and expectant mothers is provided by county welfare authorities under the Welfare Services Act (Northern Ireland), 1949.

VOLUNTARY AID FOR THE SICK AND HANDICAPPED

A number of voluntary organisations provide extensive welfare services for sick and handicapped persons in co-operation with, or supplementary to, the provision made by central and local authorities. Some convalescent homes, for instance, of a

type outside the scope of the hospital service, are administered by such bodies. In many areas invalid children and others needing care in their own homes are visited and helped by voluntary organisations. Though the need for material aid from private sources becomes less as public provision extends, many forms of help to meet individual needs that would not otherwise be met are given by voluntary agencies. Their most valuable service is probably to pioneer in aspects of personal service as yet not touched by the public services. These voluntary agencies are able to make use of many part-time or full-time unpaid volunteers.

A great deal of voluntary help is given to hospitals by voluntary bodies and individual voluntary helpers. More than half the hospitals in England and Wales have their own Leagues of Friends or similar bodies of voluntary workers who organise and undertake a variety of services for their hospitals. Many hospitals also have help from the British Red Cross Society, the Order of St. John, the Women's Voluntary Services, or a similar organisation. The operation of canteens for out-patients and trolley-shops and book and picture library services for in-patients, visiting in the wards, receiving new patients, and mending linen are among the tasks commonly undertaken.

THE MEDICAL, DENTAL AND ALLIED PROFESSIONS

Only persons whose names are on the medical register can practise as doctors under the National Health Service. Apart from medical practitioners, only persons whose names are on the dentists' register can practise dentistry in Britain. The minimum qualification for registration as a doctor requires five to seven years' training in medical school and hospital, plus one year as an intern; for a dentist, four or more years at a dental school are required. The governing body of the medical profession is the General Medical Council, first set up in 1858; that of the dentists is the General Dental Council, which succeeded the Dental Board in 1956. The British Medical Association is the doctors' professional association; that of the dentists is the British Dental Association.

The minimum period of hospital training required to qualify for State registration as a general trained nurse is three years. Training is available also in sick children's, mental, and mental deficiency nursing. The qualifying period for enrolment as an assistant nurse is one year's practical training followed by one year's work under supervision. The governing body of the nursing profession is the General Nursing Council, set up in 1919. Midwives must be certified by the Central Midwives Board. Most pupil midwives are already State registered general nurses or sick children's nurses; for them the two-year midwifery training period is reduced to one year. The Royal College of Nursing and the Royal College of Midwives are the professional bodies for nurses and midwives.

Only registered pharmaceutical chemists may practise as pharmacists or describe themselves as such, and qualifications requiring four to five years' academic study and practical training are necessary for registration. The Pharmaceutical Society of Great Britain is the governing body of the profession. Training as an ophthalmic optician takes three years followed by a year under supervision. Under the Opticians' Act, 1958, a General Optical Council regulates the profession and, in due course, only registered ophthalmic opticians (or registered medical practitioners) will be allowed to test sight.

For the professions of almoner, chiropodist, dietitian, medical laboratory technician, occupational therapist, psychiatric social worker, physiotherapist, radiographer and speech therapist a good general education is required followed by a professional training. The length and nature of the training varies according to the profession, and may be as long as three years.

MEDICAL RESEARCH

The Medical Research Council (see also pp. 209-10) is the main governmental organisation engaged in medical research in Britain. A considerable amount of research is also carried out in the universities and their associated medical schools and teaching hospitals, while the Minister of Health and the Secretary of State for Scotland, and hospital boards and committees, are also able to initiate and maintain research within the National Health Service. The Public Health Laboratory Service, administered by the Medical Research Council for the Ministry of Health, also undertakes research in addition to its more routine duties, and this provides an important complement to the work of the council.

A valuable contribution to research in particular branches of medicine is made by private organisations, of which the British Empire Cancer Campaign and the Nuffield Foundation are the largest. There is close co-operation between the Medical Research Council and these organisations to ensure the best allocation of their respective resources.

Medical Research Council

The Medical Research Council's programme of work is carried out both in its own research establishments and by independent investigators, in the universities and elsewhere, who receive grants from the council. The programme includes fundamental studies of the structure and natural processes of the body; clinical and laboratory studies of disease; the development and evaluation of special methods of treatment and also of prophylaxis and diagnosis; and the study of social and occupational factors affecting health and the efficiency of body and mind.

In planning and carrying out its programme, the council is assisted by special advisory committees which it appoints. One of the more important of these is the Clinical Research Board, set up in consultation with the health departments to assist the development of clinical research.

The Public Health Laboratory Service

The Public Health Laboratory Service provides a network of bacteriological and virological laboratories throughout England and Wales to assist in the diagnosis, prevention and control of epidemic diseases. Its largest establishment is the Central Public Health Laboratory at Colindale, in north-west London, which includes the National Collection of Type Cultures, the Standards Laboratory for Serological Reagents, the Food Hygiene Laboratory, the Epidemiological Research Laboratory and reference laboratories specialising in the identification of certain infective micro-organisms. In addition to the central laboratory, there are 8 regional laboratories and some 50 area laboratories.

In Scotland and Northern Ireland there is no separate public health laboratory service; bacteriological work is undertaken mainly in hospital laboratories.

EDUCATION

There are nearly nine million children and young people in full-time attendance at schools, universities, training colleges or technical colleges in the United Kingdom. Over 90 per cent of school children attend publicly provided or aided schools. The universities are independent, self-governing institutions but are aided from public funds. Most technical colleges and other centres of further education are publicly maintained. Many schools and colleges continue to benefit from the endowments provided by benefactors in past centuries.

The bulk of the expenditure on education in the United Kingdom therefore comes from public funds. It is estimated that the total public expenditure on education, including university education, will exceed £900 million in the year 1959-60.

In England and Wales, the main development of publicly provided primary education dates from 1870, and that of secondary education from the beginning of the present century. In 1833 the Government had begun to make annual grants to the voluntary societies which were providing schools, and the Elementary Education Act of 1870 accepted the principle of compulsory education. By the end of the nineteenth century, elementary education had become virtually both compulsory and free. Public provision of secondary education (already begun in Wales) started in England under the Act of 1902. The Education Act of 1944 now governs public education in England and Wales. It seeks to widen and improve educational opportunities at every stage.

The Scottish and Northern Ireland educational systems both have long histories independent of that of education in England, but the same general policy is now being implemented throughout the United Kingdom, with some national variations.

Educational Administration

Administration of publicly provided education in Britain is divided between the central Government departments (the Ministry of Education for England and Wales, with its separate Welsh Department, the Scottish Education Department, and the Ministry of Education for Northern Ireland), local education authorities, and various voluntary organisations. The relation between these three groups is based on consultation and co-operation, both by direct contact between the parties and through Her Majesty's Inspectors who act as liaison officers, particularly between local education authorities and the departments.

The local education authorities (called education authorities in Scotland) are responsible for ensuring that adequate provision is made in their areas for the two stages of school education (primary and secondary), and that those pupils who would profit by proceeding to a university have the opportunity of doing so. They are also responsible for the provision of all forms of 'further education', i.e. post-school education outside the universities.

The planning of the curriculum is largely in the hands of the head teacher of each school and the individual teacher. In England and Wales, teachers are not subject to direction from the central department on questions relating to curricula or methods. Her Majesty's Inspectors, who are responsible for the inspection of all schools including independent schools (which must be registered), review and report on the content and value of the education provided and, during their visits, are available as advisers. Local education authorities also employ inspectors to advise on the schools which they maintain. In Scotland, the broad outline of schemes of work in primary and secondary schools is subject to the approval of one of Her Majesty's Inspectors, and no pupil may be presented for the Scottish Leaving Certificate examination unless he has followed a course approved by the Scottish Education Department. In Northern Ireland, the curriculum of each grant-aided school is subject to the approval of the ministry, but considerable latitude is afforded both in the scope of the curriculum and in the methods employed.

SCHOOLS

Parents in Britain are required by law to see that their children receive efficient full-time education, at school or elsewhere, between the ages of 5 and 15. In England and Wales over 6,914,000 children, including about 190,000 under and 295,000 over

compulsory school age, are attending publicly maintained schools, besides 113,000 others (including 1,600 under and nearly 33,000 over school age) who are at schools receiving direct grants from the Ministry of Education. There are also 505,000 children of all ages at about 4,500 independent schools. In Scotland, 860,000 children are attending publicly maintained or aided schools and about 22,000 are at independent schools. In Northern Ireland, 270,000 children (including 11,000 under and 12,600 over compulsory school age) are attending publicly maintained or aided schools; independent schools are few. The number of schoolchildren in Britain is increasing; as the exceptionally large number of children born shortly after the second world war pass from primary to secondary schools, reduced numbers of primary school children will be more than offset by larger numbers in secondary schools, especially as more children each year stay on beyond the minimum school-leaving age. There is, therefore, a continuing demand for more teachers and more school buildings.

In England and in Northern Ireland it is usual for boys and girls to be taught together in primary schools, but rather more than half the secondary schools are for boys or girls only. Mixed schools are more common in Wales; and in Scotland all but a few city schools take both boys and girls.

The majority of independent schools are for boys or for girls only, except in classes for small children. There are, however, a few schools which are co-educational.

In England and Wales, three kinds of school are supported from public funds: *county schools* (the largest group) which are provided and maintained by local education authorities, i.e. their full cost falls on public funds; *voluntary schools* (mostly 'aided' or 'controlled' schools) which have been provided by a voluntary body, usually of a religious denomination, but which are maintained by local education authorities¹; and *direct grant schools* which are completely independent of local education authorities but receive a grant-in-aid from the Ministry of Education. These last (the smallest group) mostly provide education of the grammar school type; they include some schools of ancient foundation.

In Scotland, most of the schools supported from public funds are provided by education authorities and are known as *public schools* (in England this term is used for a type of independent school of which there are also a few in Scotland and Northern Ireland, see p. 162). There are also a few *grant-aided schools* (some of ancient foundation) conducted by voluntary managers and receiving grants direct from the Scottish Education Department.

In Northern Ireland, there are county schools, managed by local education authorities, and voluntary schools, which are grant-aided schools under voluntary management.

In England and Wales, no fees are charged to parents of children attending schools maintained by local education authorities, and books and equipment are supplied free. Grammar schools (see p. 160) receiving grants direct from the Ministry of Education still charge fees but they are required to offer each year, to pupils who have at any time previously attended a grant-aided primary school for not less than two years, free places to the extent of not less than 25 per cent of the previous year's admission to the upper school; and a further 25 per cent of the places must be put at the disposal of the local education authorities if they require them. Pupils occupying these latter places need not previously have attended a grant-aided primary school. Day pupils not holding free places are entitled to claim a remission of fees in accordance with an approved income scale, and the Ministry of Education

¹ Aided schools have more independence than controlled schools, but they are partly responsible for maintaining their buildings (see p. 165) whereas controlled schools are not.

pays the governors of the school the amount of the fees so remitted. Local education authorities also pay for some free places in independent schools, which normally charge fees. A number of independent schools are able to offer some scholarships from endowments.

In Scotland, education authorities may charge fees in certain schools provided that this does not prejudice the provision of free education for all who desire it.

In Northern Ireland, no fees are charged to parents of children attending any county or voluntary primary, intermediate or special school; qualified pupils attending both county and voluntary grammar schools receive scholarships from the local education authorities which cover the whole or most of the fees charged by the school.

Primary Schools

A child's primary education continues until about the age of 11 in England, Wales and Northern Ireland and 12 in Scotland. There are some *nursery schools* and classes for children between 2 and 5 years old. In England and Wales, there are *infant schools*, or departments, for all children between 5 and 7 and *junior schools* for those aged 7 to 11, while in Scotland there are *primary departments* for children aged 5 to 12 years.

In Scotland, primary pupils must be taught reading, writing, arithmetic, English, music, art and handwork, nature study, physical training and, at the appropriate stage, history, geography, and written composition; girls must learn needlework. Religious instruction is also given. In England, Wales and Northern Ireland, the curriculum is similar in scope, with the addition in Wales of the teaching of Welsh. (Children who speak Welsh at home normally receive their primary education in Welsh and are taught English as a language.)

Secondary Schools

Public provision of secondary education is being greatly extended with the aim of giving all children an education suited to their particular abilities.

England, Wales and Northern Ireland

Since the organisation of schools is a responsibility of local education authorities in England and Wales, subject to the approval of the ministry, the type of provision made for secondary education varies to some extent between areas. In some areas, different types of school specialise, in particular in the later years, in different types of course, with arrangements for the transfer of pupils between schools where desirable; in some areas, flexibility is achieved by an overlap of the courses provided in different types of school. There are, however, two main types of publicly maintained secondary schools in England and Wales: grammar schools and secondary modern schools.

Grammar schools take children who hope to reach a university and others likely to profit from an academic type of education. A large proportion of university students are recruited from these schools which, in England and Wales, are attended by about one secondary school pupil in four. *Secondary modern schools* form the largest group of secondary schools. They give a general education with a practical bias, closely related to the interests and environment of their pupils. There is also a small group of *secondary technical schools*; these schools offer an education related to industry, including commerce, and agriculture, but still general, and not vocational, in purpose.

Each local education authority decides how the selection shall be made for its secondary schools: generally speaking, this selection depends upon an assessment of the child's ability as shown in the primary school, often coupled with objective

tests taken at about eleven years of age, which are commonly known as the 'eleven-plus'. There is provision for an appeal to the Minister of Education in the event of a dispute between a local education authority and a parent, and almost all authorities reconsider original decisions when subsequent events prove this to be necessary. Both the system of allocating children to different types of secondary school and the selection methods used have been the subject of much public discussion and critical thought. Local education authorities are constantly experimenting with methods of selection which will minimise any strain on children or their parents. At the same time, the authorities are seeking to organise their schools in such a way that every child will have, and feel that he has, the opportunity to develop his talents to the full.

The London County Council and some other local education authorities are establishing *comprehensive schools* providing all types of secondary education for all, or most of, the children of a district. In urban areas, such schools tend to be larger than the other types of school and may have as many as 2,000 pupils.

In Northern Ireland, there are grammar schools, *secondary intermediate schools*, which are the equivalent of the secondary modern schools in England and Wales, and *technical intermediate schools* which offer the same facilities as secondary technical schools in England and Wales.

The number of pupils remaining at school beyond the minimum leaving age has been increasing steadily for some years. Twenty-one per cent of the 16-year-old age group is now still in full-time education, at schools or technical colleges, and 12 per cent of the 17-year-old age group. Most grammar school pupils remain at school until they are 16 years old, some until they are 17, 18 or 19 years old. Most secondary modern pupils at present leave at the age of 15, but the number staying on until the age of 16 is increasing.

Scotland

Scottish secondary schools fall into two main categories, those providing courses extending normally to three years, generally called *junior secondary schools*, and those providing courses of five or six years, known as *senior secondary schools*. In each type of school the courses are intended to provide a general education, but they are differentiated in character to suit the varying needs and abilities of the pupils, and include literary, commercial, boys' technical, domestic and rural courses. While some schools are purely junior secondary and some purely senior secondary, there are also a number of schools of the comprehensive type in which all kinds of courses, both junior secondary and senior secondary, are provided. Over one-third of all pupils go on to senior secondary courses on reaching secondary school age. Many schools also provide modified courses for pupils of limited ability for whom the normal courses are too exacting.

Promotion from the primary to the secondary school takes place usually between the ages of 11½ and 12½. The fitness of pupils to profit from the various types of secondary course is assessed on the basis of teachers' estimates of attainment, intelligence tests, and attainment tests, with due regard to the wishes of the parents. There is provision for an appeal to the Secretary of State for Scotland in the event of a dispute between the education authority and the parent and also for the reconsideration of original allocations if, later, transfer to another course appears to be necessary.

Independent Schools

The largest and most important of the independent schools are known in England as public schools, although not all schools classed as public schools are independent (those which are not are mostly direct-grant schools) and public schools form only a minority of all independent schools.

The *public school* is a characteristic English institution which has made a notable contribution to English education. Many public schools date from the sixteenth century, some are older (e.g., Winchester, founded in 1382, and Eton, founded in 1440), and many have some income from endowments. Each is controlled by its own board of governors. Public schools have emphasised the importance of character-building, and in these schools were developed the prefect system, whereby day-to-day discipline is largely maintained by the pupils themselves, and the house system, whereby a school is divided into groups of about 50 pupils, each under the care of a housemaster. The public school is also characterised by a high staffing ratio and a high proportion of pupils doing advanced work. A public school is often, although not necessarily, a boarding school; day boys are also taken at some of these boarding schools. The usual age of entry to the independent public schools for boys is 13 and the leaving age about 18. There are some girls' public schools modelled to a certain extent on the public schools for boys.

Independent schools also include *preparatory schools*, many of them boarding schools, for boys aged from about 8 to 13 years most of whom are intending to enter public schools; some similar schools for girls; and a wide range of other day and boarding schools covering every age group and grade of education and every variety of educational method. Some of these schools are owned and managed, often under a trust deed, by independent non-profit-making bodies. Others are privately owned by proprietors for whom the running of the school provides a living.

Secondary School Examinations

In 1951, the General Certificate of Education superseded the former School Certificate and Higher Certificate examinations in the secondary schools (State-aided and independent alike) of England and Wales. This examination, which may also be taken by candidates not attending school, is conducted at three levels (ordinary, advanced and scholarship). Most grammar school pupils and an increasing number of pupils from other secondary schools take the examination at ordinary level. Many technical college students also take the certificate examinations. The advanced and scholarship examinations are at university entrance and scholarship level respectively. Most candidates are at least 16 years old on 1st September of the year of their first examination, but pupils can sit at an earlier age at the discretion of the headmaster or headmistress of their school, and many do so.

In Scotland, the courses in senior secondary schools lead to presentation for the Scottish Leaving Certificate at about the age of 17, although many pupils who are under that age take the examination. The certificate, which can be taken only by pupils in attendance at Scottish schools, is awarded on examinations conducted by the Scottish Education Department. To encourage pupils who might leave at the age of 15 to stay at school for at least another year, a new ordinary grade leaving certificate for fourth year senior secondary school pupils (who are usually about 16 years old) is to be introduced in 1962.

In Northern Ireland, the Junior Certificate Examination is taken at about the age of 15 and the Senior Certificate Examination, which is conducted at two levels, at about 17 years of age.

Teachers

Teachers are appointed by local education authorities or school governing bodies or managers. In 1958, there was one full-time teacher to 26 pupils in publicly maintained primary and secondary schools in England and Wales; the figure was 24 for Scotland and 28 for Northern Ireland. The high birth rate at the end

of the second world war is the chief of several factors in the present need for more teachers.

There are about 155 teachers' training colleges in England and Wales; their total capacity is to be increased by 16,000 places, or two-thirds, over the next few years, by expansion of about a third of the existing colleges and the building of several new ones. At present, the usual training course lasts for two years, but there are three-year courses for women taking housecraft or physical education and the ordinary course is to be extended to three years in September 1960. There are 24 university departments of education providing a one-year course for graduates. In Scotland, there are four colleges of education, two denominational colleges and a college for training women teachers of physical education. Courses are normally of one year's duration for graduates or the equivalent, and of three years for non-graduates. Northern Ireland has two general teachers' training colleges, one university training department and three specialist colleges—one for training teachers of physical education, one for teachers of domestic science and one for teachers of art. The basic course in the general training colleges lasts three years. The education departments, the universities, local education authorities and other bodies provide a variety of short courses for practising teachers.

Teachers from schools in the United Kingdom go to a number of overseas countries each year under interchange schemes or schemes for temporary overseas posts. Nearly 100 teachers from the United States and about 50 teachers from Canada exchange posts for a year with teachers from Britain, and similar exchange schemes, on a smaller scale, operate between Britain and Australia, New Zealand, South Africa and the Federation of Rhodesia and Nyasaland. There are also official schemes operating between Britain and several other European countries for similar exchanges and for temporary assistants' posts for language specialists.

There are national salary scales for teachers in schools and other educational institutions maintained from public funds in England and Wales, in Scotland, and in Northern Ireland; and these scales influence the salaries paid to teachers in independent schools. There are also national superannuation schemes which are administered by the central departments.

In England and Wales, agreed salary scales are submitted to the Minister of Education by joint committees of representatives of local education authorities' and teachers' associations. The best-known of these committees are the Burnham Committees dealing with the salaries of teachers in primary and secondary schools and in establishments of further education. The minister can accept or reject (but not modify) the committees' recommendations and make the approved scales mandatory on local education authorities.

Broadcasting and Visual Aids

The School Broadcasting Department of the British Broadcasting Corporation sends out over 55 sound transmissions a week which reach more than 28,000 schools in the United Kingdom, over 70 per cent of the possible total. School broadcasting does not attempt to cover the whole school curriculum, or to replace the teacher, but to supplement existing work in the schools.

Television broadcasts to schools were begun in 1957 by both the British Broadcasting Corporation and the Independent Television Authority. In June 1959, 1,282 schools were equipped to receive the daily television programmes. From September 1960, the BBC hopes to broadcast to schools ten television programmes a week, with daily repeat broadcasts; the ITA programmes for schools are also to be extended. Other visual aids to education—films, film strips, wall charts, pictures, and models—are being increasingly used in Britain's schools.

Religion in Schools

In England and Wales, all children in county or voluntary schools, that is, all schools wholly or partly financed by local authorities, receive religious instruction and take part in a daily corporate act of worship unless their parents object. In county schools, and in certain circumstances in voluntary schools, religious instruction of an undenominational Christian character is given. In all kinds of voluntary school there is opportunity for denominational instruction. Over a third of the schools maintained by local education authorities in England and Wales are voluntary schools and the majority of these are Church of England primary schools. There are nearly 2,000 Roman Catholic voluntary schools and smaller numbers belonging to other religious bodies. In county schools in Northern Ireland, clergy have a right of access to give religious instruction to children of their denomination for a limited period each week. In Scotland, subject to safeguards for the individual conscience, matters relating to religious instruction are in the hands of the school managers, but there are a number of denominational schools conducted by education authorities.

Services in the school chapel and religious teaching are an essential part of the life and education of the independent public schools and most of these schools are linked to some religious denomination.

Health and Welfare of School Children

Physical education, including organised games, is a part of the curriculum of all schools (see p. 496).

The School Health Service provides regular medical examination and certain free treatment for all children attending schools maintained by local education authorities. Treatment facilities include dental clinics and child guidance centres. (There are also child guidance clinics in the National Health Service.) In Northern Ireland the School Health Service is operated by the health authorities.

Milk (normally one-third of a pint a day) is given free to all school children who wish to have it, and the School Meals Service provides a daily dinner at a subsidised price (remitted where there is need) to nearly half the pupils in county and voluntary schools. Education authorities have power to provide free transport for children who live more than a reasonable distance from the schools which they attend; this distance is defined as two miles for those under eight years (11 years in Northern Ireland) and three miles for those over eight years.

Special educational treatment, either in special schools or otherwise, is provided between the ages of five (or less) and 16 for children who require it on account of any physical or mental handicap, including maladjustment. There are about 950 special schools in the United Kingdom, including hospital schools, day and boarding schools, and boarding homes for handicapped children attending ordinary schools.

School Building

An extensive building programme for education has been undertaken in Britain since the end of the second world war. In the early post-war years, schools, together with factories and houses, were given priority over less essential forms of building.

Many war-damaged schools had to be repaired or rebuilt. Entirely new schools, both primary and secondary, were needed to provide for the increased number of school children and their longer school life, and for the many post-war housing estates and for the new towns; new buildings were also needed to replace or improve those which, by modern standards, were out of date and ill-equipped. Although

nearly 5,000 new post-war schools had been completed in the United Kingdom by the end of 1958, and 800 more were under construction, much remains to be done. Early in 1959, the Government announced a school building programme for the five years 1960-65 amounting in value to about £300 million in England and Wales and £65 million in Scotland.

To help voluntary schools to keep pace with county schools in the standard of their buildings, the Education Act, 1959, raised the rate of grant for alterations, improvements and external repairs to 75 per cent of the approved cost. With a few exceptions, the schools affected are Church of England or Roman Catholic aided schools. (The whole cost of maintenance of all denominational schools in Scotland, as of voluntary controlled schools in England and Wales, is borne by public funds.) Grants will also be made for building new aided secondary schools needed for children from aided primary schools which existed on 15th June, 1959.

Advantage is being taken of the opportunity afforded by the extensive post-war building programme to raise standards in public educational building and to introduce new ideas and methods in the design and construction of schools. Education authorities are using both traditional and new methods of building. Post-war school buildings are light and airy, with an imaginative use of colour and generous provision of practical rooms and space for outdoor games.

Local education authorities are responsible for providing the schools and other buildings needed for public education in their areas. The central departments exercise control by approving annual building programmes, framing regulations, fixing cost limits and approving or rejecting the authorities' plans; they also offer guidance to authorities by means of building bulletins and in other ways.

UNIVERSITIES

There are 22 universities in the United Kingdom, comprising 16 in England, four in Scotland, the University of Wales, and the Queen's University of Belfast in Northern Ireland.

The English universities are: Oxford, Cambridge, London, Birmingham, Bristol, Durham, Exeter, Hull, Leeds, Leicester, Liverpool, Manchester, Nottingham, Reading, Sheffield and Southampton. There is also the University College of North Staffordshire, which is empowered to award its own Bachelor of Arts degree. A new University College of Sussex is planned to open in 1962 or 1963.

The Universities of Oxford and Cambridge date from the twelfth and thirteenth centuries, and the Scottish Universities of St. Andrews, Glasgow, Aberdeen and Edinburgh from the fifteenth and sixteenth centuries. All the other universities were founded in the nineteenth or twentieth centuries.

The Universities of Oxford and Cambridge are each composed of a number of residential colleges. These colleges are corporate bodies governed by their own Fellows and distinct from the university. Most of the Fellows of the colleges are university teachers or officers and the majority of university teachers are also Fellows of colleges. The universities, as distinct from the colleges, own the main libraries, laboratories, and other buildings used for teaching and research.

The other universities in Britain are in the main non-residential and most are non-collegiate. Those composed of groups of largely autonomous colleges are London, which with over 20,000 students is by far the largest of Britain's universities; Durham, which includes King's College, Newcastle upon Tyne; and St. Andrews, which consists of colleges in St. Andrews itself and in Dundee. The University of Wales comprises the University Colleges of Aberystwyth, Bangor, Cardiff and Swansea, and the Welsh National School of Medicine at Cardiff.

The education departments have no jurisdiction over the universities, and their relations with them are concerned mainly with the training of school teachers, the provision of extra-mural education, and the award of scholarships from public funds. The universities receive aid from the State mainly in the form of direct grants from the Treasury which, in Great Britain, are made on the advice of the University Grants Committee, a committee appointed by the Chancellor of the Exchequer from persons with wide experience of schools and universities, or experience in industry.

The proportion of university income provided by the Exchequer is increasing and in 1957-58 was 71 per cent for the United Kingdom. Another 3 per cent was contributed by local authorities, 12 per cent by fees, and the balance by endowments and other sources.

Students

Admission to the universities is by examination and selection; there is no religious test and no colour bar. Women are admitted on equal terms with men, but at Cambridge their numbers are limited by statute (as they were at Oxford until 1957). The general proportion of men to women students is three to one; at Oxford it is six to one, and at Cambridge ten to one.

All universities in Britain limit the number of undergraduates; in spite of the increase in these limits which has taken place since the end of the second world war, the demand for places continues to be very keen and many candidates are unable to gain entrance to the university of their first choice.

At the beginning of the academic year 1958-59, there were 102,600 full-time students at universities or university colleges in the United Kingdom (99,500 in Great Britain and 3,100 in Northern Ireland). This total, already double the pre-war figure, is to be still further expanded (see p. 167).

Scholarships and Other Awards

Scholarships and other awards are now very widely available, for it is the national educational policy that no able boy or girl shall be prevented by lack of means from taking an advanced course at a university or elsewhere. About 75 per cent of university students in Great Britain are now aided from public or private funds.

The Ministry of Education offers about 2,000 State scholarships annually on open competition for full-time honours courses at universities and, in addition, it gives some 1,500 new supplementary grants each year to winners of open scholarships awarded by the universities and colleges from their own funds. The ministry also awards 225 technical State scholarships annually. (These and the ordinary State scholarships may be held at a technical college instead of a university for courses of appropriate level.)

Local education authorities in England and Wales make awards to over 15,500 other students each year to enable them to enter a university.

State studentships for postgraduate study in arts subjects are offered annually by the Ministry of Education; 256 were awarded in 1958. Postgraduate awards for scientists and technologists are made by the Department of Scientific and Industrial Research and the research councils.

In Scotland, the power of awarding bursaries and scholarships is confined in the main to the education authorities who, in exercising this power, are required to comply with regulations made by the Secretary of State. There are no State scholarships, but the Secretary of State supplements scholarships at English universities won in open competition by Scottish students.

University scholarships in Northern Ireland are awarded by the local education authorities. The Ministry of Education awards State exhibitions. Scholarships awarded by the universities and State exhibitions may be supplemented by local education authorities. Postgraduate awards are made by the Ministry of Education.

Studies and Degrees

Courses in arts and science are offered by all universities and, at nearly all universities, courses are available in one or more applied sciences. At the beginning of the academic year 1958-59, 43 per cent of full-time university students in Great Britain were taking arts courses and 57 per cent were studying science or technology (including medicine).

University degree courses generally extend over three or four years, though in medicine five or six years are required. The first degree of Bachelor (Master in Scotland) is awarded on the completion of such a course, depending on satisfactory examination results. In most universities an ordinary (or pass) degree or an honours degree can be taken, although the majority of students in England and Wales take honours courses. Further study or research is required at the modern universities for the degree of Master and by all universities for that of Doctor. Actual degree titles vary according to the practice of each university; some differentiate between the arts and sciences and some do not. Diplomas and certificates are awarded after shorter courses in some subjects.

The tutorial system of individual tuition to supplement the lecture system is a traditional and valued feature of the Universities of Oxford and Cambridge; it is now being developed in the other universities and colleges of Britain.

Most members of the academic staffs devote time to research and at all universities there are postgraduate students engaged in research. There has been an expansion particularly of research and study in science and technology in recent years (see pp. 203-4).

University Expansion

The universities of Britain are expanding rapidly to meet the greatly increased demand for university education which will arise during the next decade and also to meet the need of a modern democracy for a highly educated population and the particular need, in a technical age, for scientists and technologists.

An increase in the number of students to about 124,000 by the mid-1960s, with a further 10 per cent increase in the latter half of the decade, is planned for Great Britain alone. About two-thirds of the additional students who are expected to be in the universities by about 1965 will be students of science or technology.

An extensive building programme is in progress to provide for the increased number of students. In particular, halls of residence are being built to enable a higher proportion of students to enjoy the intellectual, social and cultural advantages of community life, and many new science buildings are needed to provide up-to-date facilities for the increasing proportion of science students.

A large programme of building for science and technology was begun in the universities in 1953. The programme includes extensions to the Imperial College of Science and Technology in the University of London to enable the number of students to be increased from 1,650 to 3,000 by the end of 1962, major developments at Glasgow, Manchester, Birmingham, Leeds and Belfast Universities, and specialised developments at other universities. In addition to the large sums required for the expansion of Imperial College, other university buildings of all kinds to the value of about £4.8 million were begun in 1956, and of £10.4 million in 1957. Building projects to the value of £12 million were begun in each of the years

1958 and 1959, and projects valued at £15 million a year have been authorised to start in the four years 1960-63. These amounts will be met from Exchequer funds; further sums will be collected by the universities.

FURTHER EDUCATION

Outside the universities there is a great variety of further education, full-time and part-time, for those of all ages who have left school. Local education authorities are required to secure such provision either directly or by aiding voluntary bodies and institutions. Vocational and non-vocational courses at all levels and in all subjects are available in technical, commercial and art colleges¹ and in evening institutes. These courses may lead to a wide variety of qualifications ranging from external university degrees and the highest technological awards to craftsman's certificates, or they may offer opportunities for pursuing leisure-time interests. In the year 1957-58, there were some 86,000 full-time students at the technical and commercial colleges (excluding art colleges) in Great Britain and some 1½ million part-time students. An increasing number of young employees, apprentices and others (468,000 in Great Britain in 1957-58) are released by their employers to attend technical or general education classes during working hours. Nearly a million other students attend evening institutes.

Technical and Technological Education

Within the field of further education, facilities for technical and technological education have been expanded greatly since the second world war and the Government is promoting further development. In 1956, the Government announced a five-year programme for the expansion of technical colleges designed to provide for an increase of about half as many again in the number of students completing advanced courses and to double the numbers released by their employers for part-time courses during the day. The cost of the programme for buildings and equipment in the five years from 1956 to 1961 was estimated at nearly £100 million, comprising £70 million to be spent on buildings and £15 million on equipment in England and Wales, and £10 million for buildings and £2 million for equipment in Scotland. A further £15 million a year in England and Wales and £2 million in Scotland is to be spent on buildings for technical education in each of the three years from 1961 to 1964. The expansion of advanced courses of further education is being helped by sharing the cost among all local education authorities.

The largest group of students attending technical colleges are young employees and apprentices who are released by their employers for study, usually on one day a week; day release study is often supplemented by attendance at evening classes. A wide variety of craft courses is available for young workers in various trades and occupations leading to appropriate qualifications at the end of a course of three to five years. Courses of a more professional character which are suitable for technicians or for those who aim ultimately at membership of a professional institution are also provided, leading to the National Certificates approved by joint committees representative of the education departments and the appropriate professional body, e.g., the Institution of Mechanical Engineers. Such courses are normally at two levels, ordinary and higher. Most courses for the ordinary certificate last three years and students usually follow them between the ages of 16 and 19. The higher certificate requires a further two years' part-time study and is generally considered to reach a level corresponding to a pass degree in the subject concerned.

¹ For further information on art colleges see p. 225.

Full-time courses are taken by large numbers of younger students who leave school to enter secretarial or clerical work and also as an introduction to apprenticeship. But the most important group of full-time students are those following advanced courses leading to an external degree of the University of London, to the Higher National Diploma (awarded by joint committees in the same way as the Higher National Certificates) or to the Diploma in Technology (a national qualification first awarded in 1958). The Diploma in Technology (Dip. Tech.) is granted on the successful completion of an approved course in a technical college and is intended to be equivalent in standard to a university honours degree. It is administered by the National Council for Technological Awards, an autonomous body set up by the Minister of Education in 1955. The council has also instituted an award higher than the diploma—Membership of the College of Technologists (MCT).

One form of advanced course which is rapidly gaining favour is the 'sandwich course'. This lasts from three to five years and consists of periods usually of three or six months spent alternately in studying full-time in a technical college and in gaining practical experience in industry; the majority of Diploma in Technology courses are sandwich courses. It is through a major increase in the number of students taking sandwich courses that the technical colleges are expected to achieve a 50 per cent increase in the output of advanced students.

There is a growing demand for courses of postgraduate standard in technical colleges for students who have already obtained a first degree, a diploma, or a Higher National Certificate. A wide range of advanced short courses of a very specialised nature is also offered for senior technical staffs engaged in industry. A considerable amount of research is also carried on in the technical colleges: the arrangements vary widely and frequently take the form of a contract between the college and a local industrial concern.

Under this system there is great flexibility in the arrangement of courses. As a result, young people can start courses at various ages on leaving school and can attain the highest qualification to which their abilities entitle them.

Technical colleges in England and Wales vary greatly in size, range of subjects, level of work and type of course. The largest has a total of some 14,000 students on the roll. The large colleges usually offer a wide variety of subjects, covering the basic technologies and the fundamental sciences. The colleges are organised in five broad groups:

- (1) *Local Colleges* (350), providing mainly part-time courses, some (lasting two to five years) leading directly to craftsman and technician qualifications such as Ordinary National Certificates and City and Guilds of London Institute Certificates;
- (2) *Area Colleges* (170), providing also some advanced courses from two to four years in duration for students starting at 18 or 19 years of age, and leading to Higher National Certificates and Diplomas;
- (3) *Regional Colleges* (22), covering wider areas than the local and area colleges, and doing a substantial amount of advanced work, including full-time and sandwich courses;
- (4) *Colleges of Advanced Technology* concentrating entirely on advanced work, including postgraduate and research work, and comprising the following nine colleges: the Birmingham College of Technology; the Bradford Institute of Technology; the Welsh College of Advanced Technology, Cardiff; Loughborough College of Technology; the Royal Technical College, Salford; the Bristol College of Technology (from September 1960);

and, in London, the Battersea, Chelsea and Northampton Colleges of Advanced Technology; (in the north-east of England, the Rutherford Technical College, Newcastle upon Tyne, has been selected as a potential college of advanced technology); and

- (5) *National Colleges*, of which seven have been established to provide advanced courses for the particularly specialised techniques of certain industries. These include colleges such as those for Rubber Technology and Food Technology and the National Foundry College; they are managed by independent bodies with grants direct from the Ministry of Education.

At present, in England and Wales, there are over 370 technical colleges (other than art colleges) that provide for full-time students, besides some 190 others which take part-time students only.

Scotland has 16 Central Institutions for further education, of which seven are technical colleges. Five of these have full-time courses leading to their own diploma or associateship and, in some, the greater part of the work is full-time. The full-time courses are of three or four years' duration and comparable in scope and standard to university degree courses. There are close ties between the central institutions and the universities. The central institutions, working on a regional basis, are supported by some 50 local technical colleges, offering full-time and part-time day courses, and by evening classes at local centres. Sixteen new colleges are expected to open in the early 1960s.

In Northern Ireland, the system of technical education is similar to that in England and Wales and includes courses leading to National Certificates. The Ministry of Education for Northern Ireland awards junior and senior trade scholarships to apprentices, to enable them to follow full-time courses of study at the Belfast College of Technology. The junior course lasts five months and the senior course eight months.

Most of the technical colleges and other further education establishments in the United Kingdom are either maintained or aided from public funds. Tuition fees are therefore moderate, and often nominal for young people under 18 years of age. Many full-time students are helped by awards from local education authorities. The awards are generally based on the results of the General Certificate of Education or a corresponding examination; they are assessed to cover tuition fees and a maintenance grant, but parents who can afford to contribute towards the cost are required to do so. There are also some scholarships available from endowments, and others are awarded under schemes organised by particular industries or companies for the most promising of their young workers. In England and Wales, State scholarships (see p. 166) are available for advanced technological courses.

Commercial Education

Commercial education is provided in local authority commercial and technical colleges, in independent colleges and by bodies organising correspondence courses. Well over half the candidates taking professional examinations in commercial subjects do so through correspondence courses.

In England and Wales, local education authorities maintain about 200 establishments that offer commercial courses at or above intermediate (i.e. Ordinary National Certificate) level: there are 15 colleges of commerce, over 170 commerce departments in technical and other colleges, and nearly 20 establishments which have advanced courses in commercial subjects in the evenings only.

The tradition of relying mainly on evening study has continued longer in commercial education than in technical education, but the Advisory Committee on Further Education for Commerce of the National Advisory Council on Education

for Industry and Commerce, in a report published in March 1959, recommended a big expansion of facilities for commercial education in England and Wales, on the lines of that already taking place in technical and technological education. In particular, the report recommends the wider adoption of commercial apprenticeship schemes and the expansion of day release and sandwich schemes.

Adult Education

Adult education (non-vocational study, outside the universities, for those who have left school) is organised by local education authorities (sometimes in association with voluntary bodies) in evening institutes, schools of art, adult education centres, community centres and youth clubs. Many of the classes are practical (e.g., handicraft classes), but there are also wide opportunities for academic study at all levels. Voluntary organisations, such as the National Federation of Women's Institutes and the National Union of Townswomen's Guilds, offer courses in handicrafts and other subjects to their members; the local education authorities usually supply the teachers.

In general, courses at the highest levels in arts subjects are provided by the extra-mural departments of the universities, many of which have full-time staff appointed for this purpose and can call on the services of other members of the university staff; by the Workers' Educational Association, which also employs organising tutors; and by other voluntary bodies. In 1957-58, 160,000 students in England and Wales attended such courses, which are grant-aided directly by the Ministry of Education and, in many cases, are assisted financially and in other ways by local education authorities.

Voluntary bodies with a particular view-point, such as the National Council of Labour Colleges and the Co-operative Union, also organise adult education courses without grant-aid. Six residential colleges (five in England and Wales and one in Scotland) directly aided by the education departments offer one-year or two-year cultural, non-vocational courses for adult students. In addition, there are about 30 other residential colleges where students can take short courses of a similar kind lasting for a few days or a few weeks. Most of these latter colleges are maintained or aided by local education authorities.

The National Institute of Adult Education provides in London a centre of information and research for adult education, as well as a channel of co-operation and consultation for the many organisations in England and Wales which are interested in the subject. It is assisted by a grant from the Ministry of Education. The Scottish Institute of Adult Education performs similar functions in Edinburgh.

Local education authorities can provide *community centres* for urban areas; these centres normally supply facilities for both vocational and non-vocational classes for the further education of young people and adults. The centres are usually managed by community associations, many of which are affiliated to the National Federation of Community Associations. Similar classes in rural areas are held in village halls and a variety of other premises by local education authorities and voluntary bodies.

Financial assistance is given by the education departments to local voluntary organisations towards the capital cost of community centres, village halls, playing fields and similar facilities for social and physical recreation for adults.

OVERSEAS STUDENTS IN BRITAIN

Opportunities for students from overseas to come to Britain to study in universities or other educational institutions, or to obtain specialised training in industry or elsewhere, have greatly expanded since the second world war. There are some

40,000 overseas students in Britain, of whom about one-third are at universities, another third at technical colleges, and the remainder training for the law, in industry, or at hospitals as doctors or nurses. In the year 1958-59, Britain's universities contained 7,000 students from Commonwealth countries overseas and 4,000 students from foreign countries. About 300 British Council¹ scholarships, tenable usually for one year in the United Kingdom, are awarded annually to graduates of overseas universities. Twelve Marshall Scholarships for university study in Britain are offered annually by the United Kingdom Government to graduates from the United States of America, and the universities and colleges themselves offer many scholarships for which graduate students of any nationality are eligible. Some two-thirds of all overseas students are from the Commonwealth.

Some universities and other educational institutions in the United Kingdom annually reserve a proportion of their places for students from the United Kingdom dependencies. At the end of 1958, there were over 11,000 students from United Kingdom dependencies studying in the United Kingdom or the Irish Republic, over 3,000 of them at universities. Of the total, 2,630 held scholarships. The chief sources of grants are funds set aside by Colonial Governments (sometimes supplemented by United Kingdom Colonial Development and Welfare funds) and funds contributed by public boards and corporations in the territories.

A wide range of public and private fellowships and scholarships for advanced study in Britain are awarded annually to students and research workers from Commonwealth countries overseas. In the year 1958-59, United Kingdom Government funds amounting to about £620,500 were available for this purpose. Under the Athlone Fellowship Scheme, for example, the United Kingdom Government has from 1951 awarded 38 fellowships a year to engineering graduates in Canada for up to two years' further study, training or research in institutions or industries in Britain. The United Kingdom is offering 500 awards under the Commonwealth Scholarship and Fellowship Plan adopted in 1959.

Under the United Nations Programmes of Technical Assistance, 500 holders of fellowship awards came to Britain in 1958 for study or training, a larger number than were received in any other country. Similarly, under the Technical Co-operation Scheme of the Colombo Plan for Economic Development in South and South-East Asia, 460 trainees came to Britain in 1957-58 for industrial training or postgraduate research, for specialised instruction or for study visits of some kind.

Under the Central Treaty Organisation (CENTO), about 40 fellowship holders a year, mainly in medicine or veterinary science, come to Britain; and under the British Technical Assistance Programme for Yugoslavia, about 150 trainees came to Britain over a two-year period between 1957 and 1959.

Arrangements for Overseas Students

Various bodies in the United Kingdom, official and unofficial, have assumed responsibility for the welfare of overseas students. Guidance is available from the

¹ The *British Council* exists to promote a wider knowledge of the United Kingdom and the English language overseas and to develop closer cultural relations with other countries. It was founded in 1934 and was granted a Royal Charter in 1940. Nine of the 30 members of its executive committee are nominated by Government departments; it is financed almost entirely from public funds. It is usually designated as the Government's principal instrument for the implementation of cultural conventions to which the United Kingdom is a party. The council maintains staffs who, in some 70 overseas countries, foster English studies, provide regular information on British life and thought and promote knowledge of the scientific, literary and other developments and achievements of the United Kingdom. It arranges study programmes in the United Kingdom for scholars, teachers and other professional visitors from overseas.

External Relations and General Branch of the Ministry of Education. The Commonwealth Relations Office is also closely associated with educational schemes for students from the overseas member nations of the Commonwealth and from the Federation of Rhodesia and Nyasaland, and is concerned with their welfare. The Students' Branch of the Colonial Office is responsible for placing scholarship holders and recommended students from the United Kingdom dependencies in universities and teacher training colleges. Student offices, set up in the United Kingdom by the majority of the dependencies and by some overseas Commonwealth member nations, are responsible for the placing of students from their territories in technical colleges, and for practical training and the general welfare of their students.

Students from overseas are given many opportunities to get to know more of Britain in their leisure time and to make friends with British people. The British Council offers a wide range of interesting and instructive activities. The council has overseas students' centres in London and in other university cities, which organise a varied programme of lectures, discussions and social and other activities. Many British people like to invite students to their homes and the British Council arranges introductions. In the vacations, there are courses in many parts of the United Kingdom which offer excellent opportunities for getting to know more about British life in town and country. In term time there are visits to various places of interest, and theatre and concert parties are arranged. The British Council assists many students to find accommodation, particularly those from the United Kingdom dependencies and from a number of other Commonwealth and foreign countries. They are met on arrival and helped to settle down quickly in their new environment.

Among many voluntary organisations which offer a welcome to overseas students are the East and West Friendship Council, Rotary, Round Table, the Victoria League, the Royal Over-Seas League, the Royal Commonwealth Society, the National Union of Students, the English-Speaking Union and Churches of all denominations. The Conference of Voluntary Societies on the Welfare of Overseas Students in London, on which the British Council and Government departments are represented, co-ordinates their work in the metropolis. In some London boroughs there are committees which help students to make contact with local residents and organisations.

YOUTH SERVICES

The object of the youth services in Britain is to provide for the leisure of young people and to offer them opportunities—complementary to those of home, formal education and work—for discovering and developing their personal resources, so that they may be better equipped to be responsible members of a free and civilised society. Young people are free to join any of the youth organisations, or none. The aim is that the facilities for recreation, educational pursuits and social contacts offered should be sufficiently varied to appeal to every type of boy and girl and should be an attractive and constructive alternative to less desirable ways of passing time. Youth leaders of today are working in a very different context from their nineteenth-century predecessors (see p. 22); the increased leisure and higher earning power of the present generation of young people, and other social factors, have changed but not lessened the leaders' task.

Responsibility for youth services is shared by the education departments, local education authorities and numerous voluntary organisations. There is no attempt to impose uniformity or to create a national youth movement. Youth groups, the

oldest-established of which have been active for over a century, have been developed and financed mainly by voluntary effort. Some of them now receive aid from public funds but all retain their independence of action. The practice of democratic self-government has an established place in most youth organisations and service to the community is encouraged. Over two million young people under 21 years of age are members of national voluntary youth organisations in Britain. There are also numerous clubs and groups which are not part of a national organisation. Many of these are connected with a church or chapel. There are also some play centres, organised by local education authorities or by social settlements and held in schools or other premises after school hours. An interesting recent development is the adventure playground; these playgrounds are established on bomb sites or other waste ground, where, with a necessary minimum of supervision, children are encouraged in imaginative and constructive play, using 'junk' such as odd bits of wood, car tyres and even old cars, in place of conventional swings and seesaws.

Many of the youth organisations formed during the nineteenth century are religious in origin and purpose; for example, the *Young Men's Christian Association* (1844), the *Young Women's Christian Association* (1855), the *Girls' Friendly Society* (1875), the *Boys' Brigade* (1883), and the *Church Lads' Brigade* (1891). Later organisations, such as the *Boy Scouts* and *Girl Guides Associations*, which, as movements, have no definite affiliation to a religious body although local groups are often attached to a church or chapel, also recognise the importance of spiritual values in the formation of character and seek to inculcate high ideals of personal conduct and of service to others.

Local education authorities have been indirectly concerned with youth services since 1918, and in 1939 the then Board of Education decided to give active encouragement to youth welfare. The board urged local education authorities to stimulate the provision of leisure activities for young people, both by co-operating with voluntary agencies and by establishing *Youth Centres* and other recreational facilities of their own. The status of youth services as an essential part of the educational system, thus recognised in 1939, was confirmed by the Education Act of 1944 and the Education (Scotland) Act of 1945. In November 1958, the Minister of Education set up a committee to review the youth services in England and Wales. In Scotland, the Secretary of State is setting up a Standing Consultative Council for Youth Service; it will be representative of the statutory and voluntary bodies concerned.

All local education authorities are required to ensure that adequate facilities for the recreational and social needs of young people exist in their areas. In areas where voluntary youth organisations are well established, local education authorities co-operate with them, for example, by making grants, by offering the use of premises and playing fields, by lending equipment, and by employing youth organisers to help in the development of local youth work; where existing services are inadequate, the authorities make provision themselves (usually in the form of youth centres and clubs). Most local education authorities have appointed local youth committees or councils, on which official and voluntary bodies are represented.

In Northern Ireland also, in accordance with strong local tradition, youth work is carried out mainly by voluntary organisations, which are eligible to receive financial assistance by way of direct grant from the Ministry of Education for Northern Ireland under the Youth Welfare, Physical Training and Recreation Acts (Northern Ireland), 1938-47. In practice, most of the necessary funds for the support of these organisations are found from voluntary sources. Under these Acts, the local authorities provide facilities such as playing fields and swimming baths. In addition, some of the provision for further education made by the local education authorities

under the Education Acts (Northern Ireland), 1947-56, is similar to the youth work of the voluntary organisations.

Youth leadership training courses are provided by many of the larger youth organisations and by some educational training establishments. At the latter, the cost to the students is met, either wholly or in part, by the education departments or the local education authorities.

Twenty-five of the largest voluntary youth organisations, each with an adolescent membership in England and Wales of at least 10,000, belong to the *Standing Conference of National Voluntary Youth Organisations*. The conference, with which smaller youth groups are associated, was founded in 1936 as a consultative body which takes action only in the name of its constituent members and with their consent. Its member organisations have a common aim in the development of character through educational and recreational interests, and in the physical, mental and spiritual training of their members. Scotland and Northern Ireland have separate standing conferences, and there is a regional standing conference for Wales.

In addition, each of the leading political parties maintains a junior organisation; and there are a number of bodies which, although not specifically youth organisations, promote the welfare of young people by giving them opportunities for physical training, holidays, camping and travel.

Contacts with youth movements in other countries are promoted by the *World Assembly of Youth (WAY)*, which was founded in 1949, following a youth conference held in London in the previous year. The British National Committee of WAY includes representatives of most of the leading youth organisations.

Finance

Finance for youth work is provided by voluntary subscriptions from members of youth organisations and others, by the money-raising efforts of members, by contributions from local education authorities and direct grants from the education departments, and by grants from charitable trusts such as King George's Jubilee Trust and the King George VI Foundation.

The local education authorities finance youth work under their direct control and also assist the local clubs and branches of voluntary youth organisations. For their expenditure on this work they receive grant-aid from central Government funds.

Direct grants are made by the education departments to some national voluntary youth organisations towards the cost of headquarters administration and training and to local youth organisations and local clubs towards the cost of new and additional facilities for young people's social and physical recreation.

Since its inauguration in 1935, King George's Jubilee Trust has contributed well over £1 million for youth work. The King George VI Foundation (created in 1953) spent nearly £1,200,000 in five years from the King George VI Memorial Fund, through existing national voluntary organisations, on schemes for the benefit of young people. It has supported leadership training schemes and has provided youth hostels and also a centre for the training of leaders and instructors in each of the four countries of the United Kingdom, besides making a grant for the hostel block of the projected National Youth and Sports Centre at the Crystal Palace in London. The foundation also undertook to provide £50,000 to finance the five-year experimental period of the Duke of Edinburgh's Award.

The Duke of Edinburgh's Award

The Duke of Edinburgh's Award Scheme was started for boys in 1956 and extended to girls in 1958. It was designed by the Duke of Edinburgh to encourage

young people (boys between the ages of 14 and 19 years and girls aged between 14 and 20 years) to develop their character and physique and to show initiative and determination. Challenge, not competition, is the keynote of the scheme. It comprises four principal groups of leisure activities, to which certain standards of achievement have been attached; these standards provide targets at which boys and girls can aim, in three successive stages. The standards are suited to the abilities of the majority, not only the specially gifted, yet they demand effort and perseverance. In order to claim an award, the boy or girl must choose one activity from each group, and must reach the prescribed standard in it. The four groups for boys are rescue and public service training, expeditions, pursuits, and fitness. The four groups of activities in the girls' scheme are design for living, interests, adventure, and giving service. During the experimental stage the schemes are open only to boys and girls who are members of one of a limited number of schools and other bodies, but they are intended eventually to include young people who, after leaving school, do not belong to any youth organisation as well as those who do.

Some Voluntary Youth Organisations

The following examples are selected to illustrate the variety and wide scope of the services and activities provided by voluntary youth organisations in Britain. Among the other numerous organisations are the *Catholic Young Men's Society*, the *Methodist Association of Youth Clubs*, the *Association for Jewish Youth* and other religious groups, the *Co-operative Youth Movement*, and the *Welsh League of Youth*.

Scouts and Guides

The *Boy Scouts Association* and the *Girl Guides Association*, which were founded by Lord Baden-Powell in 1908 and 1910 respectively, aim to develop character and good citizenship in boys and girls by training them in habits of observation, self-reliance, self-discipline, loyalty and consideration for others, and by promoting physical fitness and a knowledge of useful crafts. Both associations have worldwide affiliations, and are undenominational and non-political in character.

In March 1959, there were 266,528 Boy Scouts (aged 11 to 15 years), Senior Scouts (15 to 18) and Rovers (over 17½ years) in the United Kingdom. This total includes Sea Scouts and Air Scouts. There were also 238,668 Wolf Cubs (aged 8 to 11 years). At the end of 1958 there were 248,000 Girl Guides (aged over 11 years) in the United Kingdom, including Cadets and Land, Sea and Air Rangers (aged 15 to 21 years). There were also 249,000 Brownies (aged 7½ to 11 years).

Other Uniformed Organisations

The *Boys' Brigade*, founded in 1883, is essentially a Protestant religious organisation. Every company is attached to a church, and regular attendance at church is a vital principle. Companies have frequent drill parades, there are club rooms for games and other pastimes, and summer camps are held.

The *Church Lads' Brigade*, founded in 1891, is a similar organisation attached to the Anglican Church. Companies are formed in parishes under the direct control of the incumbent. Summer camps are a special feature of the brigade.

The *Girls' Life Brigade*, founded in 1902, is an inter-denominational organisation. Each company is connected with a church or other religious body.

The *National Association of Training Corps for Girls* comprises the *Girls' Training Corps*, the *Girls' Nautical Training Corps* and the *Women's Junior Air Corps*. Each constituent corps, besides its special activities, gives a basic training in

physical education, health and hygiene, craftsmanship and public affairs. Cadets are trained for responsibility through personal service.

National Associations of Clubs

The *National Association of Boys' Clubs* and the *National Association of Mixed Clubs and Girls' Clubs* provide recreational facilities for young people designed to develop their mental, physical and spiritual well-being. Discussion groups, handicrafts, drama, music and many other activities are encouraged.

Pre-Service Organisations

The *Sea Cadet Corps*, the *Army Cadet Force*, the *Combined Cadet Force* and the *Air Training Corps* (see pp. 120, 124 and 127), have connections with the respective Service departments and receive grants from them. In these organisations, the training of boys for entry into the armed forces is linked with training to promote their social, educational and physical development.

Young Farmers' Clubs

The *National Federation of Young Farmers' Clubs* (see p. 288) instructs its members in agricultural subjects and rural crafts; each club has the support of an advisory committee on which local farmers are represented.

Youth Sections of Adult Organisations

Youth sections are maintained by some adult voluntary organisations which have a particular function; for example, the *British Red Cross Society* and the *St. John Ambulance Brigade* train young members in first aid and home-nursing.

Political Party Youth Groups

Each of the leading political parties in the United Kingdom maintains a youth group to stimulate interest in politics, to spread knowledge of party policy among young people, and to obtain party recruits. Members are encouraged to hold debates and to engage in other social activities, and they are trained to take an active part in party politics. These groups receive no aid from public funds.

Other Bodies Concerned with Youth Work

Outward Bound Trust

The Outward Bound Trust, founded in 1946, maintains mountain schools at Eskdale and at Ullswater, in the Lake District, sea schools at Aberdovey, in North Wales, and at Burghead, Morayshire, in Scotland, and a fifth school at Holne, near Dartmoor, opened in July 1959. In these schools it provides four-week character-building courses for boys, mainly young employees of industrial firms sent at their employers' expense. The boys live as a community and are given the opportunity to assess and develop their qualities of courage, endurance, initiative and self-discipline in learning the techniques of sailing or of rock-climbing, in various physical tests, and in expeditions over rough hill country lasting several days. Similar, but modified, courses are held for girls. In 1958, 3,415 boys and 115 girls attended courses at the first four schools.

Youth Hostels Associations

The Youth Hostels Association (YHA), founded in 1930, seeks to promote knowledge and love of the countryside. It caters for young people of limited means by providing hostels where they can stay for a small charge when on walking or cycling tours or canoe trips. In 1958, the YHA in England and Wales had a membership of 187,500 and about 270 hostels. The Scottish YHA has 35,000 members

and about 90 hostels, and the Northern Ireland Association, 4,750 members and 16 hostels. The YHA is linked closely with similar organisations in other countries and, through its International Travel Bureau, it facilitates the exchange of visits.

The Councils of Physical Recreation

The Central Council of Physical Recreation, on which the leading voluntary youth organisations are represented and from which they receive practical and advisory services, is grant-aided by the Ministry of Education, by the corresponding department in Northern Ireland, and by the King George VI Foundation. The council, which was established in 1935, arranges training courses and provides instructors in games and athletics for young people and adults who wish to learn new forms of physical recreation or to improve their standards, and it organises athletic competitions and demonstrations of sport and physical training. It also arranges training holidays for young people in its three National Recreation Centres. The Scottish Council of Physical Recreation, which is grant-aided by the Scottish Education Department, maintains the Scottish Centre of Outdoor Training and also the National Recreation Centre, established with funds from the King George VI Foundation.

The National Playing Fields Association

The National Playing Fields Association, founded in 1925, has about 50 affiliated county and city associations throughout England and Wales, and branches covering Scotland and Northern Ireland. The association encourages the provision and preservation of public playing fields and playgrounds for the use of all sections of the community and advises local authorities and sports organisations on the acquisition, layout, construction and use of grounds. It keeps a watch on all matters relating to playing fields, promotes recreational activity by grants, publications and persuasion, carries out technical research and pioneers new ideas. The association has spent about £1¼ million on public playing fields and playgrounds. It also provides an information service for Commonwealth countries overseas.

V. HOUSING AND PLANNING

PROBLEMS AND ADMINISTRATION

Britain is a small country with a large population and, moreover, a population which has increased sevenfold in the last two and a half centuries. This increase has been accompanied by rapid industrial expansion. In consequence, the problems of planning, in town and country alike, spring mainly from the intensity of competing demands for land and from the unplanned concentration of most of the population in a few very large industrial areas. Similarly, many of the problems of housing reflect the attraction of population into industrial areas, and also the poor quality of much of the housing erected in the nineteenth century, now in course of replacement. Need and scope for much rebuilding resulted from the second world war, in which approximately one house in three was damaged or destroyed by enemy action.

Ministerial Responsibility for Housing and Planning

The Minister of Housing and Local Government is responsible in England and Wales for formulating housing policy, for housing standards and for general supervision of the housing programme. In planning, the minister is responsible for implementing general policy regarding the use and development of land throughout England and Wales, and for the direction and guidance of local planning authorities, the new towns development corporations and the National Parks Commission in the carrying out of their planning functions.

The Secretary of State for Scotland has similar responsibilities in Scotland.

In Northern Ireland, the Minister of Health and Local Government is responsible for housing and planning.

The Ministry of Works acts as production authority in Great Britain for the building industry. The agricultural departments are responsible for advising on the agricultural value of land proposed for housing or other development. The Board of Trade is responsible for regulating the distribution of industrial development. An inter-departmental committee on the Services' land requirements meets to harmonise Service and civilian needs and proposals for land use.

HOUSING

While responsibility for housing policy and for the general execution of the housing programme rests with the minister (see above), local authorities have executive responsibilities (as set out below) for housing in their areas.

HOUSING AUTHORITIES

In England and Wales and Northern Ireland, the local housing authorities are the councils of county boroughs, boroughs (including metropolitan boroughs), urban districts and rural districts, the London County Council and the Common Council of the City of London. In Scotland, all town and county councils are housing authorities.

Housing Powers and Duties of Local Authorities

The local housing authorities are responsible for ensuring as far as possible that housing conditions in their areas are satisfactory. They are empowered to provide housing accommodation themselves by erecting houses on land acquired by them, by acquisition of suitable houses, or by the conversion of existing buildings; and they are responsible for ensuring that houses unfit for human habitation are demolished or closed.

Scottish Special Housing Association

The Scottish Special Housing Association, a statutory body, assists local authorities in their housing programmes. It has built about one in eight of the permanent post-war houses completed in Scotland. The association is financed from Government funds and is under the general direction of the Secretary of State for Scotland.

Northern Ireland Housing Trust

The Northern Ireland Housing Trust, a statutory body, was established in 1945 to erect houses for letting, to supplement building by local authorities. The trust has built about a quarter of Northern Ireland's post-war houses.

PROGRESS AND POLICY

There are in all about 16 million houses in the United Kingdom: 14 million in England and Wales, 1½ million in Scotland, and 400,000 in Northern Ireland.

House-building was restarted after the second world war early in 1945. By mid-1959, over 3½ million new permanent houses had been built in the United Kingdom. Many other means have been employed to house the families needing homes, including the provision of temporary houses, the repair of war-damaged and other dilapidated property and the adaptation and conversion of old houses. The main emphasis in local authority housing is now on slum clearance, although shortage of housing, particularly of unfurnished accommodation to let, is still a serious problem in some areas, notably in London and some other large cities.

When the most pressing needs for additional accommodation had been met, the local housing authorities in Great Britain were, in 1954, required to prepare proposals for dealing with houses unfit for human habitation, in order to hasten slum clearance. A similar campaign was launched in Northern Ireland at the end of 1956.

New Building

The agencies for building houses in Britain are local authorities, private builders, new towns development corporations, certain Government departments which need to house the families of the armed forces or other services, and housing associations (which are non-profit-making bodies providing houses mostly for letting rather than for sale).

Local authorities (that is, for the most part, private builders under contract to local authorities) have built 68 per cent of the permanent houses completed since the second world war. In the first post-war period, when resources were very limited and the demand for houses urgent and widespread, local authorities were made responsible for the greater part of the programme. Since the beginning of 1952, private enterprise has been able to build an increasing proportion of the new houses; the restrictions on private building imposed by the post-war licensing system were finally abolished in November 1954.

In 1958, 241,525 new houses were completed in England and Wales, 32,170 in Scotland, and 4,938 in Northern Ireland. Of the United Kingdom total of 278,633, 51 per cent were built by housing authorities and new towns development corporations, 47 per cent by private builders, and the remainder by Government departments and voluntary housing associations.

Local authority houses are normally built for letting, and privately built houses for owner-occupation. In England, Wales and Scotland, local authority houses may be sold on certain conditions, with the consent of the minister, to occupying tenants or to persons in need of a house for their own use.

The central departments have issued manuals of guidance for local authorities setting standards of space, structure, design and equipment for different types of houses, and describing how estates can be laid out attractively while saving land and money, by the use of new and improved types of layout.

Slum Clearance

Because of the need to concentrate on providing new houses for families without a separate home of their own, slum clearance was virtually in abeyance for some years after the end of the second world war, and the number of houses demolished was relatively small. With the increase in the number of new houses it became possible to resume the slum clearance campaign which the war had interrupted.

Returns made by local housing authorities in 1955 indicated that there were about one million slum dwellings in Great Britain which ought to be cleared. In England and Wales, about 850,000, or 6.5 per cent of all houses, were estimated to be unfit for habitation; in Scotland, over 150,000 houses (about 10 per cent of all houses) were estimated to be unfit and due for demolition. In Northern Ireland, the number of such houses was estimated by a survey completed in 1958 to be just over 50,000.

In the three years 1956 to 1958, local authorities in England and Wales demolished or closed 138,624 unfit houses, involving 434,239 occupants; while in Scotland, 31,000 houses were demolished or closed during the same period.

At the present rate of progress, many local authorities will have completed their programmes by the end of 1960 or soon after; in some of the larger industrial towns, however, where there are a great number of small, obsolete dwellings, mostly dating from the nineteenth century, completion will necessarily take much longer.

To help in those areas where the number of slum houses is so large that it would not be practicable to replace all of them within the next few years, local authorities can acquire houses unfit for human habitation and repair them so that they may be occupied for a strictly limited period pending their demolition. The intention is that these houses should be demolished as soon as possible; temporary repairs are not intended as an alternative to slum clearance. Exchequer contributions are available to meet part of the costs of acquisition and essential repairs.

Housing authorities are under a statutory obligation to see that other accommodation exists or can be provided by them for persons to be displaced from slum clearance areas. Compensation is not payable for the demolition of a house unfit for human habitation, but, in England and Wales, owner-occupiers and business occupiers may, in certain circumstances, receive payments to alleviate hardship. Payments are also awarded, where appropriate, in recognition of good maintenance. Hardship payments are not provided in Scotland, where the basis of compensation for unfit houses is different, but payments in recognition of good maintenance are available as in England and Wales.

An Exchequer subsidy is payable to the local authority for every dwelling built to rehouse a family displaced from an unfit house.

Preservation of Old Houses of Distinction

Special consideration is given to safeguarding old houses of charm and distinction. As a result of a national survey, all those of outstanding merit are listed for the guidance of planning and housing authorities, with a view to their preservation; although, where their condition makes it necessary, they may be closed and no longer used for habitation. Certain other buildings possessing architectural or artistic merit, though not qualifying for inclusion in the national list, have been saved from demolition by works of repair and reconstruction undertaken as a result of local efforts.

HOUSING FINANCE

The average 3-bedroom house built by a local authority in England and Wales in 1958 had a superficial area of about 903 square feet and cost about £1,485 to build. Trends affecting the cost of building in recent years have been a reduction in size due to space-saving designs, and improved productivity to which the greater use of mechanical plant and better organisation and management have contributed. These factors have helped to offset increases in wages and cost of materials.

The initial capital cost of houses built by or for local authorities is met by raising loans; current expenditure, including loan repayment and interest on loans, is met from rents, rates and, where available, subsidies. Local authorities may raise loans for housing in the open market or by borrowing from the Public Works Loan Board.

Funds for houses built by private enterprise are obtained mainly by borrowing. The chief agencies concerned in lending money are the building societies, insurance companies, industrial and provident societies, and local authorities.

Building Subsidies

Housing subsidies, at varying rates and for varying purposes, have been provided in Britain since 1919, when they were first introduced to facilitate the building of houses for letting at moderate rents.

After the second world war, subsidies at higher rates, payable annually for 60 years from the date of building completion, were provided for all new housing accommodation built with ministerial approval by the local authorities, by new town development corporations, or by housing associations under arrangements with local authorities.

In England and Wales, a standard rate of subsidy was paid for ordinary houses or flats built to meet general needs, and higher rates of subsidy were provided for certain types of housing (e.g., high blocks of flats), housing built for particular purposes (e.g., for the agricultural population) and housing in special areas (e.g., poor areas of low rate-paying capacity). While the Housing Subsidies Act, 1956, provided an extended range of subsidies for special categories of housing, it reduced, and provided for the abolition of, the standard subsidy on dwellings built for general needs. This subsidy was abolished as from November 1956, except for one-bedroom dwellings, on which it was retained to encourage the provision of accommodation for elderly and single persons.

Legislation on subsidies for new housing in England and Wales is now consolidated in the Housing (Financial Provisions) Act, 1958. The categories of new building by public bodies for which subsidies are available are: dwellings built for the purpose of slum clearance rehousing, or for rehousing persons in unsatisfactory temporary accommodation (£22 rs. a dwelling a year); housing for the population moved out of a congested area (e.g., to a new town or as part of an approved scheme of town development) or moving to meet the urgent needs of industry (£24 a year); dwellings with not more than one bedroom (£10 a year); housing provided to meet

the needs of the agricultural population; housing on expensive sites, or where measures have to be taken against subsidence, or to preserve the character of the surroundings; and housing in areas where more accommodation is urgently required than could be provided by the local authority without imposing an unreasonably heavy burden on the local rates or necessitating the charging of unreasonably high rents. On flats in these categories, higher rates of subsidy are paid for blocks of four or more storeys. Grants are also available to local authorities for the provision of hostels.

Housing subsidies are separately provided for in Scotland and Northern Ireland where the amounts are generally higher on account of the different circumstances. Subsidy rates in Scotland were revised under the Housing and Town Development (Scotland) Act, 1957. These include a subsidy of £24 a house a year for housing to meet general needs, with higher rates of subsidy for special needs, particularly houses built to meet the urgent needs of industry and to relieve congestion in overcrowded areas. In Northern Ireland, annual subsidies are paid for 60 years to local authorities, the Northern Ireland Housing Trust and housing associations. The Housing Subsidy Order (Northern Ireland), 1956, altered the basis on which subsidy is paid, and prescribed a subsidy higher than the standard rate on houses built for persons displaced from slum houses. In addition 'lump sum' subsidies are paid to private persons who build houses for letting or for owner-occupation. Under the Housing on Farms Act (Northern Ireland), 1950, grants are available for the provision of new houses and for the reconditioning of existing premises to accommodate farmers and approved workers.

The cost of housing subsidies (including improvement grants) in the United Kingdom for the financial year 1958-59 was £115 million (£86 million paid by the central Government and £29 million paid by local authorities).

Improvement Grants

The Housing Act, 1949, provided Exchequer assistance for the improvement of existing housing or for the adaptation of buildings for housing by local authorities or private owners in England and Wales. Grants can be made by local authorities, with Exchequer assistance, to persons converting or improving existing buildings for housing at a cost of over £100 a dwelling. The grants may amount to half the cost, with a maximum grant of £400 for each dwelling thus provided. There are certain technical conditions which the dwellings as improved or converted must fulfil to ensure that public money is only spent on property that will provide satisfactory accommodation for a sufficiently long period. The Housing Repairs and Rents Act, 1954, considerably eased the conditions attaching to these grants; and legislation on improvement grants was consolidated in the Housing (Financial Provisions) Act, 1958, and amended by the House Purchase and Housing Act, 1959. The 1959 Act also places on local housing authorities an obligation to make standard grants for the provision in houses of a bath in a bathroom, hot-water supply, water closet, wash basin, and food store; these grants are to cover half the cost of the work, subject to a maximum grant of £155, or smaller sums if all five items are not needed. Building societies will be able to make loans, additional to those for house purchase, to make it possible for house owners to meet their share of the cost of such standard improvements. Provision for improvement grants is made in Scotland by the Housing (Scotland) Act, 1950, and the Housing (Repairs and Rents) (Scotland) Act, 1954, and the arrangements for standard grants also apply there. In Northern Ireland, an improvement grants scheme is operated under the provisions of the Housing (Miscellaneous Provisions) and Rent Restriction Law (Amendment) Act (Northern Ireland), 1956.

House Purchase Schemes

Loans to enable persons to buy their houses by a system of instalment purchase are provided by many local authorities as well as by building societies, certain insurance companies and other financial institutions.

Many local authorities also operate a scheme, whereby, for a house costing up to £2,500, they guarantee part of the loan made by a building society so that an advance greater than normal (up to 95 per cent of the value of the house in some cases) may be made to the purchaser. The Exchequer undertakes to share any liability local authorities may incur under this scheme.

Under the House Purchase and Housing Act, 1959, the Government can advance money to building societies for re-lending to prospective house purchasers. Loans can be made available to enable designated building societies to advance up to 95 per cent of the value of a private house bought for owner-occupation, provided that it was built before 1st January, 1919, and does not exceed £2,500 in value (or £3,000 in the metropolitan area). Building societies are already lending some £40 million to £50 million a year for the purchase of pre-1919 houses, in addition to some £330 million a year for newer houses. Exchequer loans for the purchase of older houses would, therefore, enable the societies to lend substantially more than at present for newer houses.

Rent Control

The majority of the privately owned houses in Great Britain which are let unfurnished are subject to rent control. Houses owned by local authorities, new towns development corporations, housing associations, and the Scottish Special Housing Association are, in general, free from control, as are new houses completed since 30th August, 1954.

Since the autumn of 1956, the Government has pursued a policy of progressive abolition of rent control on the grounds that the previous system was leading to deterioration and wasteful use of the nation's stock of housing accommodation.

The first Rent Restrictions Act was passed in 1915. The main Acts now in force, either wholly or in part, are the Rent and Mortgage Interest Restrictions Acts, 1920 to 1939, the Landlord and Tenant (Rent Control) Act, 1949, the Housing Repairs and Rents Acts, 1954, and the Rent Act, 1957.

The Rent Restrictions Acts, which before 6th July, 1957, applied, with few exceptions, to all unfurnished dwellings below a certain rateable value, limited the rent a landlord might legally recover from the tenant, while at the same time usually giving the tenant security of tenure. The Acts also made illegal most premiums for the grant of a tenancy of rent-controlled premises. Landlords restricted in this way were themselves protected against an increase in mortgage interest rates and the calling in of the mortgage, provided they paid the restricted interest due. The Housing Repairs and Rents Acts, 1954, allowed landlords to increase their rents to pay for repairs, subject to certain conditions and to a maximum limit.

The Rent Act, 1957, amended the Rent Restrictions Acts. It established, for the houses remaining in control in England and Wales, revised rent limits more in keeping with the current value of money and the cost of maintenance, and permitted in Scotland an increase in controlled rents subject to certain conditions. It provided that new unfurnished lettings should be free of control, both in the 4 $\frac{1}{2}$ million houses in owner-occupation when the Act was passed which, previously, if let unfurnished would have been subject to rent control, and in controlled houses which fall vacant and are re-let. In addition, over 800,000 houses let at controlled rents were released from control by the lowering of the limits of rateable

value below which rented houses are subject to control.¹ The Act provided for the de-control from time to time of further categories of houses by Order, subject to approval by Parliament; it also made certain exceptions and safeguards for the protection of tenants. The Landlord and Tenant (Temporary Provisions) Act, 1958, which is in force for three years, enables decontrolled tenants to remain for a limited time after a notice to quit has expired, if they can satisfy a court that they are unable to find other accommodation and would suffer hardship.

In England and Wales, the rents payable for houses (or parts of houses) let furnished or in which services are provided, are controlled by the Furnished Houses (Rent Control) Act, 1946. The Rent Act, 1957, provided that if the premises let unfurnished would be above the rateable value limits for control, they should not, if let furnished, come within the scope of the Act of 1946. Local rent tribunals, appointed for the purpose, determine the rents of furnished lettings in cases referred to them by either party or by the local authority. Similar legislation for controlling rents of furnished lettings was passed for Scotland in 1943.

Somewhat similar measures of control apply in Northern Ireland. In 1951, legislation was passed which permitted prescribed increases in the rent of controlled houses, provided that they were maintained in good repair; and the Housing (Miscellaneous Provisions) and Rent Restriction Law (Amendment) Act (Northern Ireland), 1956, permitted an increase of one-third in the rent levels fixed by the 1951 Act where the landlord had recently incurred expenditure of a certain amount on repairs. The 1956 Act also released from control houses with a net annual value of over £50 (with certain safeguards) and houses with a net annual value of over £26 of which the landlord was in actual possession when the Act came into force, or of which he subsequently obtained possession.

TOWN AND COUNTRY PLANNING

The land of Britain is one of the most densely populated areas in the world and it is therefore of vital importance in the public interest that competing claims to its use should be settled in such a way that the necessary balance between them is maintained.

From 1909 onwards, the idea of the planned use of land was given a degree of expression in successive Acts of Parliament, but because the pattern of development over much of the country had already hardened into large unplanned urban concentrations (as a result of the industrialisation processes of the previous century) the powers granted to planning authorities by the early Acts were inadequate for the task in hand.

The twenty years between the two world wars were decades of expansion in industry, engineering and house-building; population was increasing, and there was a general movement towards better standards of living, and consequently a greater need for systematic planning than had hitherto been required. At the beginning of the nineteen-thirties, a major effort was made to consolidate and strengthen planning law and to extend the planning powers of central and local authorities to the point at which they could exercise effective control. Despite this effort, which culminated in the Town and Country Planning Act, 1932, inter-war planning legislation had only a limited effect, mainly because it failed to deal adequately with the question of compensation, which had always been an obstacle to satisfactory planning. By the nineteen-twenties, it had become generally accepted that the

¹ The limits under the Act are £40 a year in the London metropolitan police district and in Scotland and £30 a year elsewhere. For definition of rateable value see p. 76.

property of an individual might be subjected to restrictions in the public interest, provided that just and due compensation (out of public funds) were paid. In theory, such payments should, to some extent, have been balanced by revenue from betterment charges (i.e. charges payable by those whose property had been enhanced in value by development), but, in practice, such charges proved almost impossible either to determine or to collect. As a result, local authorities often hesitated to acquire land necessary for development for fear of being involved in compensation liabilities beyond their means; and, therefore, in spite of improved sanitary and environmental conditions and some progress in preserving amenities, many of the outstanding problems of land use remained unsolved.

Renewed efforts were made to deal with these problems immediately before and during the second world war. Between 1937 and 1942 three expert committees were appointed to study and report upon (1) the unregulated growth and spread of industry, (2) the hampering of planning by the financial and administrative difficulties of compensation and betterment and (3) the encroachment of urban development upon the countryside. After the war, other committees studied the question of new towns and national parks.

Almost all the principal planning recommendations of these committees have now been incorporated in Acts of Parliament, as follows: the Distribution of Industry Acts, 1945 and 1950; the New Towns Acts, 1946 and 1959; the Town and Country Planning Acts, 1947 to 1959; the National Parks and Access to the Countryside Act, 1949; the Town Development Act, 1952; and the Housing and Town Development (Scotland) Act, 1957. Town and country planning in Northern Ireland is governed by the Planning and Housing Act (Northern Ireland), 1931; the Planning (Interim Development) Act (Northern Ireland), 1944; and the Planning Acts Amendment Act (Northern Ireland), 1944.

Planning in Great Britain

The pattern of land use in Great Britain is governed by the Town and Country Planning Act, 1947, and the Town and Country Planning (Scotland) Act, 1947, which are the principal Acts and provide for (a) the co-ordination of planning by means of development plans drawn up by local planning authorities and approved by the Minister of Housing and Local Government or the Secretary of State for Scotland, and (b) for the control of development by making it subject, generally, to the permission of a local planning authority or of a central Government department. The Acts also give extensive powers to public authorities to acquire and develop land for planning purposes, provide for grants from public funds towards the cost of schemes of major redevelopment, and deal with certain questions of amenity, e.g., the preservation of buildings of special historic or architectural interest, and of trees and woodlands, and the control of advertisement display.

Compensation for loss of development value through the refusal of planning permission is paid by the Government according to a formula laid down in the 1954 Town and Country Planning Acts. Compensation to owners whose land is compulsorily purchased is paid by the acquiring authorities, the amount being based (under the Town and Country Planning Acts, 1959) on the price the land might have fetched if sold in the open market, with safeguards for local authorities against paying for value brought about by their own activities and for owners against depreciation which the threat of public acquisition might cause. In general, expenditure on planning purposes (other than schemes of major redevelopment) is taken into account in the amount of the general grant paid to local authorities under the Local Government Act, 1958, and the Local Government and Miscellaneous Financial Provisions (Scotland) Act, 1958.

Development Plans

Local planning authorities (in England and Wales, the councils of counties and county boroughs and, in some areas, joint planning boards; and in Scotland, councils of counties and of large burghs, and the councils of the two small burghs of St. Andrews and Thurso) are required to prepare and submit development plans covering the whole of their areas to the Minister of Housing and Local Government and to the Secretary of State for Scotland respectively. Each development plan is expressed by an authoritative written statement describing the major projects in the plan, supplemented by a series of maps based on a survey of the physical and other resources of the area. Fresh surveys must be carried out every five years and plans may be extended and altered at any time, so that they may be kept up to date. Local authorities must advertise their plans when they submit them for approval, and the ministers concerned must consider objections and representations from the public, and when necessary, arrange for local inquiries to be held. Once a plan has been approved, it cannot be challenged except on the grounds that it is *ultra vires* or that statutory requirements have not been fulfilled.

All the planning authorities in England and Wales had submitted their plans by 1957, and by the beginning of 1959, 129 plans had been approved. By the same date, 43 of the 57 local planning authorities in Scotland had submitted plans or part-plans; 26 of them had received approval to whole plans and 7 to part-plans. A number of authorities in both countries had also submitted amendments and additions to their original plans. During recent years, emphasis has been placed increasingly upon the need to preserve open country round large towns, and a number of planning authorities in England and Wales have put forward sketch maps showing plans for the extension or maintenance of 'green belts' for incorporation in approved development plans. In Scotland, a number of green belts have been defined in the original development plans as submitted and approved.

The Distribution of Industry

The Distribution of Industry Acts, 1945 and 1950, and the Town and Country Planning Acts, 1947, contain provisions (described on pages 253-4) to control the location of industry throughout the country.

General problems of industrial development are dealt with jointly by a number of Government departments, but the main responsibility for controlling the siting of industry as apart from its general location rests with the local planning authorities, for it is their duty, subject to the consent of the Board of Trade, to ensure that industrial development fits properly into existing and expanding communities and is consistent with the best use of land.

New Towns

The New Towns Act, 1946, gives the Minister of Housing and Local Government and the Secretary of State for Scotland, who are the responsible ministers, powers to make an order designating any area of land (which may include as its nucleus the area of an existing town) as the site of a proposed new town, after consultation with the local authorities concerned and if it is in the public interest to do so. Once the site has been designated, the responsible minister appoints a development corporation (consisting of a chairman and up to eight other members) to be responsible for the development of the new town. One of the first tasks of the development corporation is to prepare a master plan which becomes the basis for development proposals, each of which covers a part of the area. Every proposal is submitted to the responsible minister who must consult the local planning

authority and, together with the Treasury, be satisfied with the proposal on economic grounds before giving approval.

The development corporations have powers in general (subject to the consent of the Minister of Housing and Local Government or the Secretary of State for Scotland) to acquire, by agreement or compulsory purchase, any land or property in the designated areas which is necessary for their purposes, and they may provide housing, commercial and industrial premises, estate roads and other buildings or services essential for the development of the towns. In England and Wales, the Minister of Housing and Local Government has made a special development order to exempt the development corporations from the necessity of obtaining planning permission from the local planning authorities; but in Scotland, permission to develop has to be obtained from the local planning authority.

The capital cost of developing the new towns is advanced to the corporations from public funds and must be repaid on terms approved by the ministers with the concurrence of the Treasury. The corporations must submit their reports (which must include copies of their audited accounts) annually to the Minister of Housing and Local Government or to the Secretary of State for Scotland, who are responsible for laying them before Parliament.

As each new town in England and Wales is substantially completed (a point which has almost been reached in some towns), the development corporation will be dissolved and, under the terms of the New Towns Act, 1959, its assets and liabilities will be handed over to a central agency—the Commission for New Towns. The commission, which will operate during the period of new town consolidation, will consist of not more than fifteen members, appointed by the Minister of Housing and Local Government, and it will be responsible for maintaining and enhancing the value of the land entrusted to it. No new towns commission is, as yet, proposed for Scotland, since, in that country the completion of the initial stage of new town development is not yet in sight.

There are fifteen new towns in Great Britain—twelve in England and Wales and three in Scotland. Eight of the new towns in England and Wales—Basildon and Harlow in Essex; Hemel Hempstead, Stevenage, Hatfield and Welwyn in Hertfordshire; Crawley in Sussex; and Bracknell in Berkshire—are designed to help in absorbing excess population from the Greater London area; four others—Corby in Northamptonshire; Aycliffe and Peterlee in Durham; and Cwmbran in Monmouthshire—are to serve the special needs of their areas. Of the Scottish new towns, East Kilbride in Lanarkshire and Cumbernauld in Dunbartonshire are being established to assist in housing the surplus population from Glasgow; Glenrothes in Fife will also make a contribution towards the relief of Glasgow overspill, but its primary function is to provide housing and other facilities for miners and their families transferring to an area where mining activities are steadily expanding.

The new towns are generally recognised as one of the most successful experiments of the post-war years, industrially, financially and socially, and they represent a notable achievement in the translation of planning into reality. By the end of June 1959, the total population of the new towns in England and Wales, designed to be 550,000 when the towns are completed, had reached an estimated total of 408,000 (including the people previously living in the area); 70,346 houses had been built by the development corporations, and a further 8,717 were under construction; 358 factories had been established and a further 14 were being erected; 1,471 shops had been completed, and 281 more were being built; 129 schools had been finished and 19 more were under construction. Considerable progress had been made in the construction of the town centres of most of the towns; many miles of roads had been laid; large main sewerage works had kept pace with industrial and domestic needs;

an increasing number of police, fire and bus stations and services had been provided; and sites had been reserved in the town centres for municipal buildings of all kinds. Sites had also been reserved for general hospitals, on one or two of which building had already begun.

In addition, some advance had been made in the provision of permanent community buildings and other communal amenities, which is the responsibility of the local authorities of the towns. Approximate overall figures for certain amenities, including temporary buildings and some which are adequate for limited use only, are (in England and Wales): 190 halls for hire; 30 community centres; 70 churches and church halls; 30 public libraries; 25 health centres and clinics; and 40 public houses.

In the Scottish new towns, at the end of June 1959, the population, eventually to be 130,000, had reached an estimated figure of just over 40,500; 9,214 houses had been built, with a further 2,688 under construction; 114 shops had been completed and 25 were under construction; 11 new schools were in use, and the extension of communications, public services and communal amenities was under way.

Under the New Towns Act of 1946, Parliament approved a consolidated fund of £50 million to provide for advances to the development corporations for work on the new towns. This fund was increased by subsequent Acts and, under the 1959 Act, stood at £400 million.

Town Development Schemes and War-damaged Cities

Provision for town development schemes was made in the Town Development Act, 1952, and the Housing and Town Development (Scotland) Act, 1957. These Acts were passed to help relieve congestion in overcrowded urban areas in England, Wales and central Scotland, by encouraging the transfer of population, together with the necessary industrial and other employment, to appropriate county districts and other areas. In England, Wales, and Scotland, negotiations between a number of exporting and receiving authorities had been completed by 1959, and in several areas rebuilding was under way. Receiving authorities participating in town development schemes may receive special Government subsidies or grants.

Individual plans for the reconstruction of areas of extensive war damage have also been drawn up and approved and, by 1959, the central areas of several provincial cities, e.g., Bristol, Coventry, Exeter, Kingston-upon-Hull, Portsmouth, Plymouth, and Southampton, had been almost entirely rebuilt. In addition, by the end of June 1959, projects valued at more than £50 million had been completed in the square mile of the City of London, while in other areas of east and south-east London scheduled for redevelopment, e.g., Stepney, Poplar, Bethnal Green, Bunhill Fields, Bermondsey, the South Bank, Elephant and Castle, Lewisham Clock Tower, and Woolwich, considerable progress both in layout and actual building had been made.

National Parks and Access to the Countryside

The National Parks and Access to the Countryside Act, 1949, provided for the designation of a number of extensive areas of beautiful country in England and Wales as national parks. In these areas the characteristic landscape is to be carefully preserved, and facilities for open-air recreation may be provided or improved.

A National Parks Commission for England and Wales was set up by the Act of 1949, and by June 1959 its work had resulted in the establishment of ten of the twelve national parks recommended by the National Parks (England and Wales) Committee, which reported in 1947.

The established parks are: the Peak District, the Lake District, Snowdonia in North Wales, Dartmoor in Devon, the Pembrokeshire Coast, the North York

Moors, the Yorkshire Dales, Exmoor in Devon and Somerset, Northumberland (comprising most of the upland country from the Cheviots in the north to the Roman Wall in the south), and the Brecon Beacons in South Wales. These parks cover a total area of 5,254 square miles, almost one-eleventh of the area of England and Wales. The administrative arrangements for the parks are as follows: the Peak District and Lake District National Parks are administered by joint planning boards; for Dartmoor, the Pembrokeshire Coast, the North York Moors and Northumberland, special park planning committees of the respective county councils have been set up; while in Snowdonia, the Yorkshire Dales, Exmoor and the Brecon Beacons (which include areas of more than one county council) there are park planning committees representative of each of the county councils concerned, advised by a park joint advisory committee. All these authorities control development in the parks and take such positive action as they deem necessary to enhance natural beauty (e.g., by restoring derelict land, by removing unsightly structures, and by tree planting), and to promote the enjoyment of the area by the public (e.g., by providing car parks, camping sites or other kinds of accommodation). Government grants of 75 per cent are available towards certain approved expenditure.

Under the provisions of the 1949 Act, the National Parks Commission was also given authority to select other, possibly less extensive, areas in England and Wales for designation as 'areas of outstanding natural beauty' in order to keep them unspoiled. By the end of June 1959, seven such areas had been established, and proposals for a further nine were under consideration.

A Scottish National Parks working party has considered all five areas recommended as national parks in Scotland—the Trossachs, Glen Affric, the Cairngorms, Wester Ross (Loch Maree) and Glen Coe—with a view to their possible development under existing statutory powers, and has submitted to the Secretary of State for Scotland a report on each of these areas.

In addition to the establishment of national parks, the Act provided that a complete survey should be made of all footpaths and bridle-ways in England and Wales to be a comprehensive national record of public rights of way, and that long-distance routes should be created, which by connecting existing footpaths and bridle-ways would become continuous rights of way. By the end of June 1959, 45 county councils had prepared draft maps of rights of way for the whole of their areas, based on individual surveys of footpaths carried out by parish and county district councils. Responsibility for making proposals for long-distance routes rests with the National Parks Commission; once the proposals are approved by the Minister of Housing and Local Government, it falls to the local authorities to give effect to them. By the end of June 1959, the National Parks Commission's proposals for the creation of six routes, covering 929 miles, had been approved; progress had been made by means of surveys, cairn building and footpath agreements, towards their completion; and discussions were taking place between the commission and the relevant local authorities regarding the establishment of several more routes of this kind.

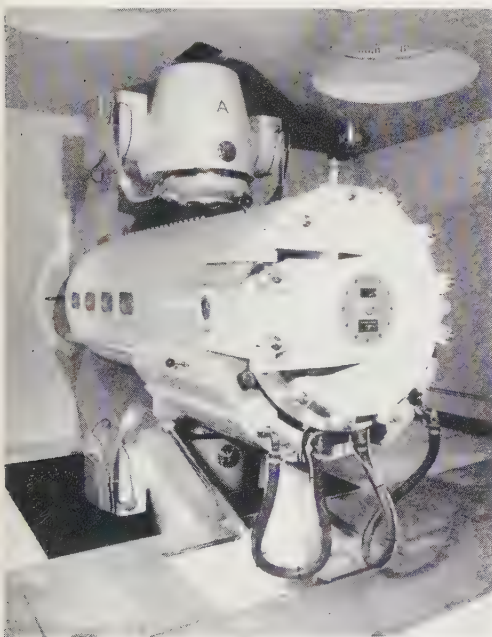
The Act also gives local authorities the task of surveying in their areas the access enjoyed by the public to open country, i.e. mountain, moor, heath, down, cliff or foreshore, and empowers them to improve such access, where necessary, by means of agreements with owners or by access orders. Considerable areas of the Peak district have been opened to the public by this means.

National Forest Parks

The Forestry Commission has formed, and opened to the public, seven National Forest Parks in Great Britain: Argyll, Glen Trool, Glen More, and Loch Ard (renamed the Queen Elizabeth Forest Park to commemorate the Coronation) in



The *S.R.N.I* Hovercraft, a revolutionary research vehicle which has successfully crossed the English Channel, is supported on a cushion of air and operates at heights just sufficient to clear waves and surface irregularities on land. It was invented by Mr. C. S. Cockerell, and built by Saunders-Roe with the support of the National Research Development Corporation. Much larger commercial versions are planned.



The new radiotherapy unit for cancer treatment at St. Thomas's Hospital, London, includes a pressure chamber in which the patient, under an anæsthetic, breathes oxygen. The presence of oxygen makes the cells more vulnerable to radiation.

The President of the Royal Society (see p. 202), Sir Cyril Hinshelwood, at the headquarters of the Society which in 1960 celebrates the tercentenary of its foundation. The exhibit illustrates research into virus structure, using new techniques in electron microscopy, carried out by a Medical Research Council unit at the Cavendish Laboratory Cambridge.





St. Paul's Church, Harlow

Industrial spine road



High blocks of flats with lower buildings give variety at Harlow.

ENGL

Below: Part of Harlow, one of England's 12 new towns





Hempstead.



NEW TOWNS

shopping centre. Harlow is one
Scotland has three (see p. 188).



A primary school at Crawley.

Houses at Hatfield.





This mobile library of the Nottinghamshire County Library serves children in outlying villages (see p. 228).

Opera interval at Glyndebourne, Sussex (see p. 237).



Scotland; the Forest of Dean in England; Snowdonia in Wales; and the Border Forest Park (adjoining the Northumberland National Park to the westward), which includes forests on the borders of Northumberland and Cumberland in England and of Roxburghshire in Scotland. The total area of the seven parks is rather less than half a million acres, including planted areas and unplanted moorland and mountains. Camping facilities are provided in most of the parks.

Nature Conservation

The responsibility for nature conservation rests with the Nature Conservancy (see p. 211), which derives the necessary powers for the proper discharge of its functions from the National Parks and Access to the Countryside Act, 1949. The object of conservation, which is to influence soils, water, vegetation and animal life, either directly or indirectly by means of research, experiment and control, entails the acquisition and management of a representative series of reserves, as well as the establishment of laboratories for use in long-term research schemes and the making of grants-in-aid for specified research.

Seventy-six Nature Reserves, covering 135,094 acres in Great Britain, had been declared by the end of June 1959. The Cairngorms Reserve, which covers 39,639 acres, is the largest of these; it is also one of the largest in Europe. In addition, three forest nature reserves have been set up: the Forestry Commission, by agreement with the Nature Conservancy, has set aside two areas of 200 acres each for ecological research and timber production; a similar arrangement has been made with the Crown Estate Commissioners by which a 45-acre area is being managed in the interests of nature conservation and ecological research.

In addition to national nature reserves and forest nature reserves, there were, by end-June 1959, seven local nature reserves, established and administered by local authorities, in consultation with the Nature Conservancy, using their own powers under the Act.

Apart from the statutory nature reserves, there are also a number of non-statutory reserves managed by societies such as the Society for the Promotion of Nature Reserves, County Naturalists' Trusts and the Royal Society for the Protection of Birds. Under bird protection legislation, powers have long existed to create statutory bird sanctuaries, where interference with birds and their eggs is penalised.

Preservation of Amenities

Responsibility for the preservation of the historic, scenic and architectural beauties of Great Britain is vested mainly in the Minister of Housing and Local Government, the Secretary of State for Scotland, and the various statutory planning authorities and commissions. The Ministry of Works is also concerned, both because it is the department responsible for the maintenance of royal parks and palaces and because it is empowered by the provisions of the Historic Buildings and Ancient Monuments Act, 1953, to assist in the preservation of historic houses by making grants (after consultation with specially constituted historic buildings councils) for their upkeep together with their contents and their adjoining land. By the end of June 1959, grants totalling £2½ million towards the cost of urgently needed structural repairs to 653 historic buildings in England, Scotland and Wales had been offered and accepted.

Unofficial amenity societies, wholly dependent upon the support of their members, include: the Council for the Preservation of Rural England, founded in 1926 to organise concerted action to secure the protection of rural scenery and of town and country amenities from disfigurement or injury; the Association for the

Preservation of Rural Scotland, founded in 1927 for the protection of rural scenery and of the amenities of country districts and towns and villages in Scotland; the Commons, Open Spaces and Footpaths Preservation Society; the Ramblers' Association; the Society for the Protection of Ancient Buildings; the Pilgrim Trust; the National Trust for Places of Historic Interest or Natural Beauty in England, Wales and Northern Ireland; and the National Trust for Scotland. The National Trust for England, Wales and Northern Ireland (which was founded in 1895 and by 1959 had over 70,000 members) is (apart from the Crown) the largest land-owner in the United Kingdom. It has acquired, mainly through gifts, over a thousand properties, which it holds for the enjoyment of the public; it administers more than 250,000 acres of land of great natural beauty; and it owns many fine gardens. The National Trust for Scotland, an independent body, founded in 1931 to promote the preservation of places of historic or architectural interest or of natural beauty in Scotland for the benefit of the public, now has about 12,000 members and has under its care some 60 properties, covering in all over 55,000 acres.

Planning in Northern Ireland

The Planning and Housing Act (Northern Ireland), 1931, which is the main source from which power to prepare a planning scheme is derived, provides for the preparation by local authorities of planning schemes for development or redevelopment of their areas, with the general object of securing proper sanitary conditions and amenities in connection with the laying out and use of land. The Interim Development Act of 1944 enables persons wishing to carry out development to do so without delay, while ensuring that such development shall conform to the provisions likely to be included in the planning scheme for the area.

The provisions of the Acts brought all land in Northern Ireland under planning control and required every local authority to prepare a planning scheme for its area. Interim control is exercised in accordance with the section of the 1944 Act which requires that, where application is made to an authority for permission to develop, the authority may grant the application conditionally or unconditionally or may refuse it altogether. In the event of a refusal or conditional approval, the applicant has a right to appeal to the Ministry of Health and Local Government for Northern Ireland (which is the department primarily responsible for the administration of the planning Acts) or to an independent person appointed by the ministry.

Since 1944, all local planning authorities in Northern Ireland have made appreciable progress in the preparation of outline plans which indicate broadly the proposals for their areas. The outline plans provide a foundation for the preparation of more detailed plans at a later stage and also facilitate materially the work of interim development control. Many interim development applications have been decided by local planning authorities, and appeals lodged with the ministry have been relatively few.

Northern Ireland Forest Park

In May 1955, Northern Ireland's first forest park at Tollymore Park, Newcastle, County Down, was opened to the public. Situated at the foot of the Mountains of Mourne, it covers an area of 1,200 acres. It contains an arboretum comprising a wide variety of native and exotic trees, and is rich in mountain, river and parkland scenery. Caravan facilities and a camping site for youth organisations are available.

VI. THE CHURCHES

Every person living in Britain possesses the right of religious freedom as described in Article 18 of the Universal Declaration of Human Rights: he may change his religion at will, and may manifest his faith in teaching, worship and observance. Churches and religious societies of all kinds may own property, conduct schools, and propagate their beliefs in speech and in writing.

Freedom of conscience in religious matters was achieved gradually from the seventeenth century onwards; in many cases, relaxation in the administration of laws discriminating against minority religious groups preceded the repeal of the legislation concerned. Heresy ceased to be a civil offence with the passing of the Ecclesiastical Jurisdiction Act, 1677, and the Toleration Act of 1688 granted freedom of worship to Protestant dissenters. In 1828, the repeal of the Test and Corporation Acts freed nonconformists from political disabilities and made it possible for them to be appointed to public offices; Roman Catholics gained political emancipation under the Roman Catholic Relief Act, 1829; the Jewish Relief Act, 1858, enabled Jews to become members of Parliament; while religious tests that had been imposed on prospective students and members of the academic staff of the universities of Oxford, Cambridge and Durham were successively abolished by Acts of 1854, 1856 and 1871. Nowadays, there is no religious or denominational bar to the holding of public office, except that the Lord Chancellor may not be a Roman Catholic.

In the services administered by the State, such as the armed forces, the national hospitals, and the prisons, the clergy of the established Church of England or the Church of Scotland provide the principal ministrations and are paid a salary by the State for this part of their work. Chaplains of the Roman Catholic Church and ministers of other denominations may also be appointed or specially called in as required. Voluntary schools (see p. 164) provided by churches of any religious denomination may be wholly or partly maintained from public funds.

There is no precisely accurate or uniform method of assessing the number of adherents to the various churches in the United Kingdom, since no inquiries are made about religious beliefs in population censuses or other official returns, and each church adopts different criteria in counting its members. The membership figures given in the following sections should therefore be taken as approximate.

Church of England

The Church of England is the Established Church, and claims to be the ancient catholic church of the land. At the Reformation in the sixteenth century, it repudiated the supremacy of the Pope, but retained the historic episcopate, and the creeds and sacraments upon which its doctrines are based; therefore it claims to be both 'catholic' and 'reformed'. Its form of worship is embodied in the Book of Common Prayer, which was first compiled in 1549.

Relations with the State

No single Act of Parliament defines the position of the Church of England in the way that the Treaty of Union, 1707, defines the position of the Church of Scotland. In England, the relationship of Church and State is one of mutual obligation—privileges accorded to the Church which are balanced by certain duties.

The Church is uniquely related to the Crown, in that the Sovereign, who must be a member of the Church of England, is called 'Defender of the Faith' (a statutory title as protector of the Church) and promises on his or her accession to uphold it. The coronation of the Sovereign is performed by the Archbishop of Canterbury, Primate of all England; prayers for the Sovereign and other members of the royal family are said in all the statutory services of the Church; all bishops and deans are appointed by the Sovereign on the advice of the Prime Minister; and all clergy take the oath of allegiance to the Crown.

The Church is further linked with the State through the House of Lords, in which the two archbishops of Canterbury and York and the twenty-four senior diocesan bishops have seats. This makes it possible for the views of the Church leaders to be expressed freely on any moral issue raised in connection with the corporate conduct of the State as well as on specifically ecclesiastical issues—a matter of particular significance in view of the fact that clergy of the Church of England (together with those of the Church of Scotland, the Church of Ireland and the Roman Catholic Church) are legally disqualified from sitting in the House of Commons.

The Church is not free to change its form of worship, as laid down in the Book of Common Prayer, without the consent of Parliament; canon laws (Church rules) cannot be made or amended without the consent of the Queen in Council; and the measures of the Church Assembly (as distinct from their regulations) are not valid without parliamentary assent.

Church Organisation and Government

The Church is organised by geographical areas, and not by congregations. There are 43 dioceses in England, each under a bishop, which are grouped into two provinces, each under an archbishop: Canterbury (29 dioceses) and York (14 dioceses). The dioceses are sub-divided into ecclesiastical parishes, of which there are just over 14,000. Everyone in England is born in a parish, and the parish church is expected to play an active part in local life. Many people who do not attend its services regularly tend to look to it for such personal ministrations as baptism, marriage and burial.

Spiritual authority in the Church rests with the bishops. The authoritative bodies in matters of doctrine, belief and practice are the Convocations of Canterbury and York, each presided over by its archbishop, and consisting of an upper house of bishops, and a lower house of representatives of each cathedral chapter, archdeacons and elected clergy. The Convocations meet not more than three times a year.

The legislative and central administrative body of the Church is the National Assembly of the Church of England, which is commonly called the Church Assembly. It was set up by the Crown in 1919 at the request of the two Convocations, and was given power to legislate by measure by the Church of England Assembly (Powers) Act of 1919. It can discuss any matter connected with the Church of England, but may not make any doctrinal statements, nor infringe upon the rights of the Convocations. It consists of three houses: bishops, clergy and laity. The first two houses are composed of the members of the Convocations; the house of laity consists of men and women elected every five years by the lay members of diocesan conferences, and the constitution allows for 10 co-opted members.

The Church Assembly usually meets three times a year. Measures, after passing through various stages in the assembly, are presented to an ecclesiastical committee of both Houses of Parliament, consisting of 30 members, of whom 15 are appointed by the Lord Chancellor and 15 by the Speaker of the House of Commons. This committee lays the measures, together with a report upon them, before both

Houses. If both Houses so resolve, the measure is then sent to the Sovereign for Royal Assent, after which the measure has the same force and effect as an Act of Parliament. Parliament, though it may reject a measure, has no power to amend it.

The Church Assembly is the centre of an administrative system consisting of boards and councils dealing with various aspects of the Church's work, such as education, training for the ministry, and Church work overseas. The Church Assembly, through the Schools Council of its Board of Education, is responsible for 8,000 Church of England schools of all types, for approximately half of which the Church bears a quarter of the cost of improvements, alterations and repairs (see also p. 165).

Parochial church councils were set up by a measure in 1921 to associate the laity with the government of the Church in the parish. The members of these councils are appointed by the parochial electors, i.e. persons who are baptised, are not members of any other church, are 17 years of age and over, and have applied for membership of the electoral roll of the parish where they habitually reside or worship. The estimated number on the parish electoral rolls in 1957 was just under three million.

The Church of England has its own ecclesiastical courts. Their jurisdiction, as it is exercised today, consists almost entirely of faculty cases, with occasional cases of discipline against clergy, either for moral or ecclesiastical offences. A faculty is necessary for any specific alteration or addition to the fabric or ornaments of a church or to a churchyard.

The Church has 26 church training colleges for teachers¹ and 25 theological colleges.

Church Finance

Each parish is responsible for its own finances, and also contributes an annual fixed quota to diocesan funds, and each diocese similarly contributes to the Church Assembly. In the diocese, the financial authority is the diocesan board of finance, which administers the money contributed by the parishes, and acts as trustee on behalf of the parochial church councils, which have only limited powers of holding property. The Church Assembly fund and various other central funds (including that for the training of ordination candidates) are administered by the Central Board of Finance of the Church of England. The State makes no payment to the Church except for services rendered (e.g., chaplaincies to the armed forces and in prisons).

The Church Commissioners, a body created by measure in 1947 to replace the former Ecclesiastical Commissioners and Queen Anne's Bounty, administers the endowment income of the Church. It is largely responsible for the payment of stipends of the clergy, and it also provides finance for pensions, new churches, parsonage houses, and church schools. The total income from investments in the financial year 1957-58 was £12,373,948. The total annual income of the Church is estimated to be approximately £35 million; no precise figure can be given.

The Anglican Communion

The Anglican Communion comprises 15 constituent churches in the United Kingdom and overseas, with a total membership of over 40 million.

In the United Kingdom, there are unestablished Anglican Churches in Ireland, Scotland and Wales: the Church of Ireland (disestablished in 1869) has 14 dioceses

¹ A programme of expansion of church training colleges, which included an increase in the number of students from nearly 5,000 to nearly 8,000 and the building of a new college, was approved at the 1959 spring session of the Church Assembly.

in Northern Ireland and the Irish Republic, and some 354,000 members; the Episcopal Church in Scotland, 7 dioceses, 377 churches and some 108,000 members; and the Church in Wales (disestablished in 1920), 6 dioceses and some 200,000 Easter communicants.

Outside the United Kingdom, the Anglican Communion exists wherever Englishmen have gone as settlers, traders and missionaries. The Protestant Episcopal Church in the United States of America, the Church of India, Pakistan, Burma and Ceylon, and the Anglican Churches of South Africa, Canada, Australia, New Zealand, the West Indies, China, Japan, West Africa and Central Africa are all autonomous members of the Anglican Communion. In the Middle East, Jerusalem now has the status of an archbishopric with jurisdiction over five dioceses in the region. A constitution has been agreed for a new province of East Africa, to include five dioceses in Kenya and Tanganyika. In addition, there remain eleven overseas dioceses under the jurisdiction of the Archbishop of Canterbury. Terms of limited inter-communion with the Church of South India, similar to those already existing between that Church and the Church of India, Pakistan, Burma and Ceylon, were laid down in resolutions passed by the Convocation of Canterbury in 1955.

Since 1867, the Lambeth Conference has met every tenth year (except for the war years) as an unofficial consultation between all Anglican bishops; it is presided over by the Archbishop of Canterbury. The last meeting, which was held in London during July and August 1958, was attended by 310 bishops from all parts of the Anglican Communion. The conference has no executive authority, but enjoys great moral prestige, and its findings on doctrine, discipline, relations with other communions, and on the attitude of the Anglican churches to political and social questions are widely studied.

The Church of Scotland

The established church in Scotland is the Church of Scotland, which in government is presbyterian. It has been described as 'the supreme example of a church which is established and yet is free'. Its position, defined in the Treaty of Union, 1707, was further safeguarded by the Church of Scotland Act, 1921.

Whereas in episcopacy, church government is a hierarchy of persons, in presbyterianism there is a hierarchy of courts. All ministers are of equal status, and each of the 2,272 churches is governed locally by the Kirk Session, consisting of the minister and elected elders (of whom there are over 43,000 in all): above this is the Court of the Presbytery, then the Court of the Synod, and finally the General Assembly, which meets annually and consists of elected ministers and elders presided over by an elected Moderator who serves for one year. The Sovereign is represented at the General Assembly by the Lord High Commissioner. The Church of Scotland has fought with the utmost vigour throughout the years for complete freedom in all spiritual matters and for the right to appoint its own officers and to decide all matters of doctrine and discipline. This freedom is recognised by Parliament, and the decisions of the Church of Scotland are not subject to parliamentary debate or modification.

The thorough training for the ministry, which lasts at least six years, has given the church a high reputation for scholarship and has in turn influenced the standard of education in Scotland. The membership of the Church of Scotland in 1959 was estimated at 1,316,000.

The Free Churches

The phrase 'Free Churches' is now commonly used to describe those churches in England which were more generally known in the past as 'non-conformist'

churches; all churches in Scotland except the established Church of Scotland; and all churches in Wales and Northern Ireland, where there is no established church. The main Free Churches are the Methodist, Baptist and Congregational Churches, and the unestablished presbyterian churches throughout Britain. In addition, there are a number of other protestant denominations in the United Kingdom as well as such religious associations as the Society of Friends and the Salvation Army, which have certain links with the main Free Churches.

The word 'nonconformist' signifies dissent from certain of the formularies and practices of the established church. The Methodist Church, for example, originated in the evangelical revival led by John Wesley within the Church of England during the eighteenth century. More positively, the Free Churches would affirm that the reason for their existence is a deep conviction about the nature of religious worship.

The Methodist Churches

The largest of the Free Churches is the Methodist Church, formed in 1932 by the union of the majority of independent Methodist Churches. It has some 740,000 adult full members. The supreme authority is the annual conference, and the system of government is in many ways presbyterian: the leaders' meeting corresponding to the kirk session, with circuit meetings and district synods resembling presbytery and synod. One of the characteristics of Methodism is its strong emphasis on lay leadership. There are over 23,000 trained lay preachers sharing the ministers' work and preaching in many local churches.

Methodist Churches which did not join the union in 1932 include: the Independent Methodists, in which ministerial service is on a purely voluntary basis and women (many of whom are ministers) have full equality with men; and the Wesleyan Reform Union which, while retaining the essential Methodist doctrine, gives autonomy to each of its 177 individual churches.

The Congregational and Baptist Churches

The Congregationalists are the oldest community of dissenters in Britain. In 1831, most of their churches were formed into the Congregational Union. Local churches have formed county and national unions, whose secretariat and assemblies have much influence, but no compulsive authority over them, since great importance is attached to the autonomy of local church meetings. Adult membership is approximately 214,000.

Like the Congregationalists, the Baptists are for the most part grouped in associations of churches, and the majority of these belong to the Baptist Union formed in 1813. Baptists differ from Congregationalists in that they practice the baptism of believers only; they do not baptise infants. The Baptist churches have a total of about 324,000 members.

The Unestablished Presbyterian Churches

The largest of the presbyterian churches outside the established Church of Scotland is the Presbyterian Church in Ireland; in Ireland, there are 30 presbyteries (some of which are situated in the Irish Republic) and the communicant membership is about 136,000. The Presbyterian (or Calvinistic Methodist) Church of Wales, which arose from the revivalist movement led by Howell Harris in 1735, now includes a considerable proportion of the Welsh-speaking population; its members number some 147,000. The Presbyterian Church of England is organised in 14 presbyteries and has nearly 71,000 members; its highest court is its general assembly; women are admitted to the eldership and ministry.

Other presbyterian churches in Britain include: the Free Church of Scotland; the United Free Church of Scotland; the Free Presbyterian Church of Scotland;

the Reformed Presbyterian Church of Scotland; the Reformed Presbyterian Church of Ireland (which consists of 43 congregations and preaching stations, all but five of which are in Northern Ireland); and the Non-Subscribing Presbyterian Church of Ireland, comprising three presbyteries (two of which are in Northern Ireland), with 30 congregations.

Other Denominations

Among other Protestant denominations in the United Kingdom are: the Unitarian and Free Christian Churches, which number about 300, with a membership of some 20,000, and are united by loyalty to the principle of freedom of thought in religion; the Churches of Christ (known also in the United States of America as Disciples of Christ) which have been an organised community in Britain since early in the nineteenth century, and now have 165 churches in the United Kingdom, and a membership of about 8,500; the British Province of the Moravian Church, which is an international missionary church, with 40 congregations and preaching stations in the United Kingdom and some 2,800 communicant members; the Free Church of England (or Reformed Episcopal Church), which was formed in 1844 as a direct result of the Oxford Movement, and now has 50 churches; the Society of Friends; and the Salvation Army.

The Society of Friends, or Quakers, was founded in the middle of the seventeenth century by George Fox. It has no ordained ministry and does not observe the sacraments. One of the chief characteristics of the Quakers is their belief in pacifism and their firm adherence to pacifist methods. Their influence in many parts of the world, especially in social reform and in the relief of suffering, is very wide in relation to their numbers. There are about 21,600 Quakers in Britain; they have 438 places of worship.

The Salvation Army, founded in 1878 by a Methodist, William Booth, is a religious movement, composed of men and women who seek the spiritual and social betterment of their fellows, primarily by preaching the gospel to those hitherto untouched by religious effort. The movement, in which military rather than ecclesiastical terminology is used, has branches all over the world, and its social work (particularly that connected with the welfare of members of the British armed forces serving overseas) is well supported.

The Christian Scientists, who are in no way connected with any other church, have 336 branch churches and societies in Britain.

The Roman Catholic Church

The Roman Catholic hierarchy in England and Wales, which became temporarily extinct during the sixteenth century, was restored in 1850; the Scottish hierarchy became extinct in the early seventeenth century and was restored in 1878, while the Irish hierarchy never became completely extinct. The normal government of the Roman Catholic Church, namely by territorial archbishops and bishops, is once again the rule in the whole of the United Kingdom.

The central territorial unit of the Roman Catholic hierarchical organisation is the province or archdiocese under the metropolitan, who is always an archbishop. The chairman of the bench of bishops in England and Wales is the Archbishop of Westminster. A province normally comprises several dioceses, each under a bishop aided by a chapter of canons and others, and by priests in charge of the parishes into which the diocese is sub-divided. In England and Wales, there are four provinces and archdioceses (Westminster, Liverpool, Birmingham and Cardiff), 14 dioceses, and 2,184 parishes; in Scotland, there are two provinces and archdioceses (St. Andrews and Edinburgh, and Glasgow), six dioceses, and 386 parishes; in Northern

Ireland, there are six dioceses (several of which have territory partly in the Irish Republic and partly in Northern Ireland since there is one hierarchy for the whole of Ireland) and about 172 parishes. In the whole of the United Kingdom, there are over four and a half million adherents (including children) to the Roman Catholic faith.

The Roman Catholic Church attaches great importance to the education of Roman Catholic children in their own faith, and requires that the children of marriages between Roman Catholics and members of any other Church should be brought up as Roman Catholics. Many schools for Roman Catholic children in the United Kingdom are staffed by members of the great Religious Orders for men and women, who also undertake other social work such as nursing, child care, and the conduct of homes for the aged.

Jewry

Jews first settled in England at the time of the Norman conquest, but were expelled at the end of the thirteenth century by an edict of Edward I. The present Anglo-Jewish community dates from 1656, the earliest arrivals being the Sephardi (from Spain and Portugal). At the end of the seventeenth century an Ashkenazi community (from Germany and East Europe) was established, which increased rapidly and spread to the principal provincial cities. By 1956, as a result of the virtual destruction of whole Jewish communities on the Continent during the second world war, the Anglo-Jewish community of some 400,000 had become the largest group of Jews in Europe.

The Anglo-Jewish community is divided into two schools of thought, each of which has its own form of worship and its own services: the Orthodox (the original groups) and the Reform. The Reform Movement, which attaches less religious importance to some of the ancient rituals and practices of the Jewish faith, began in 1840. It was followed in 1901 by the establishment of the Liberal Jewish Movement which, in addition, lays emphasis on the reinterpretation of traditional Judaism in the light of modern thought and custom. Of the Jews in Great Britain who belong to any kind of synagogue, about 80 per cent are Orthodox. The Chief Rabbi is the head of the largest group (Ashkenazi) within Orthodox Jewry; the Haham is the head of the Sephardi group.

Synagogues in Britain of all sections of Jewry number approximately 445, including 17 Liberal and 15 Reform congregations. There are a few schools which cater exclusively for Jewish children, but the vast majority attend the ordinary State or independent schools, and receive extra-curricular instruction in the Jewish faith.

Other Religious Communities

Many immigrants to Britain from overseas Commonwealth countries and foreign countries have established centres for worship for their own communities in the United Kingdom, and especially in London. The Christian communities include the Greek, Russian, Polish and Serb Orthodox, with some Estonian and Latvian Orthodox, and also the Armenian Church. There are also churches belonging to the Lutheran Churches of Denmark, Finland, Germany, Norway and Sweden, and centres where Estonian, Latvian and Polish Lutherans worship according to their creed. In addition, the French, Dutch, Swiss, Hungarian and Polish Reformed Churches are represented in Britain, the first three having their own places of worship.

The principal non-Christian communities in Britain are the Moslems and the Buddhists. The Moslems are the most widely represented; it is estimated that the Islamic population of Britain may now number about 100,000. Their principal

mosque is the Shah Jehan Mosque at Woking, and there are also mosques in London, Birmingham, Manchester, Cardiff and Glasgow.

A Buddhist temple was opened in South Kensington, London, in 1954; and other premises were opened in 1956 as a meeting place and discussion centre for the several hundred thousand adherents of Buddhism in Britain.

Co-operation between the Churches

An outstanding feature of recent years has been the growth of co-operation between the Churches. The British Council of Churches was founded in 1942 and includes official representatives from almost all the churches of the British Isles, with the exception of the Roman Catholic Church. The council facilitates common action between the churches and seeks to further the cause of Christian unity. The Archbishop of Canterbury is president. In addition, most, though not all, of the Free Churches in England and Wales are members of the Free Church Federal Council (formed in 1940 by the amalgamation of the Federal Council of Evangelical Free Churches with the National Free Church Council), the aims of which are to promote unity and joint action between the Free Churches, and to provide a channel through which the Free Churches can communicate and negotiate with central and local government organs as a united body. Discussions on changes in organisation to allow of closer relations between the Church of England, the Church of Scotland, the Episcopal Church in Scotland, and the Presbyterian Church of England have been taking place for the last few years. Conversations on the same subject are also being held between representatives of the Church of England and the Methodist Church.

The Archbishop of Canterbury is advised on these matters, both at home and abroad, by the Church of England Council on Inter-Church Relations.

The Anglican, Presbyterian and Free Churches in the British Isles also participate in the World Council of Churches, which was constituted at Amsterdam, Netherlands, in 1948, and is to hold its third assembly in 1961 at the University of Ceylon. The council links together 168 churches in over 50 nations for co-operation in action and the study of common problems.

Co-operation of other Churches with the Roman Catholic Church takes place on specific issues, but there is no machinery of continuous co-operation. The Council of Christians and Jews works for better understanding between members of the two religions, and deals with problems arising in the social field.

VII. PROMOTION OF THE SCIENCES AND THE ARTS

THE PROMOTION OF THE SCIENCES

While the promotion of the sciences in the United Kingdom is largely the concern of those learned societies and institutions devoted specifically to this end, only a small part of the research which is vital to science is carried out directly by them. Most of the 'pure' or 'fundamental' research is conducted in the universities, which also play an essential part in promoting the sciences by maintaining a steady supply of trained scientists. In practice, it has become impossible to distinguish clearly between science and its extensive applications in everyday life, with the result that scientific research in the widest sense has become the concern also of industry and of various departments of Government.

Today it is an acknowledged responsibility of the Government not only to undertake research directly but also to keep under review the facilities for the training of scientists, to encourage fundamental research, to finance certain research projects, and to ensure that adequate research is directed to matters of national interest. As a result, a system of collaboration has developed between the universities, industry, the learned societies and the Government which yet leaves the greatest possible measure of freedom to individual scientists.

Though scientific research is carried out mainly under three different kinds of administration—university, industry and Government—there is strong liaison and close co-operation between them, while the learned societies, whose membership is derived from all three categories, remain free to play a most important part in the discussion and publication of the results of research.

Important work is also undertaken by independent organisations—for example, in medical research, by the British Empire Cancer Campaign, the Imperial Cancer Research Fund, the Nuffield Foundation (which as a charitable trust also undertakes a wide range of other activities, see footnote on p. 142), the Lister Institute of Preventive Medicine, the Wellcome Foundation and Trust, and by some large pharmaceutical firms.

THE LEARNED SOCIETIES

The learned societies have had a profound and lasting influence upon the development and organisation of science in Britain; not only have they provided the background for the continuity of research from the seventeenth century onwards, but they have been a meeting ground where scientists can foregather for the exchange of ideas, and a reliable source from which new ideas for the enrichment of knowledge can flow. Although today the bulk of research operations is conducted under other auspices, the learned societies have retained their traditional function of facilitating the spread of scientific knowledge and the application of new discoveries.

At present there are over 200 learned scientific societies in Britain with approximately 400 scientific publications. There are also numerous technical institutions and professional associations, many of which are playing a distinguished part in promoting their own branches of science and are interested in the education and professional well-being of their members. Prominent examples of these are the

British Medical Association, the Institution of Civil Engineers, the Institution of Mechanical Engineers, the Institution of Electrical Engineers, the Institution of Chemical Engineers, the Institution of Metallurgists, the Royal Institute of Chemistry, the Institute of Physics, and the Institute of Biology.

The most eminent of the learned societies concerned with science in its broadest aspects (as distinct from those societies with specialised interests and activities) are noted below.

The Royal Society (or, more fully, the Royal Society of London), founded in 1660, occupies a unique place in the country's scientific affairs, although for two centuries scientists were in a minority among its members, whose interests then lay mainly in history, art, archaeology or exploration. The society has always been independent of State control but its advice on scientific matters has frequently been sought by the Government. Today its influence remains as strong as ever and its Fellows serve on most of the official advisory councils and committees concerned with science.

Its Fellowship consists of approximately 600 eminent scientists and 60 foreign members. Admission of the former is restricted to 25 a year, and of the latter to four a year; a few eminent non-scientists are also elected to Fellowships. The society maintains a library (145,000 books of a purely scientific nature), issues a large number of publications, including the *Philosophical Transactions* and the *Proceedings*, and convenes conferences which are attended by scientists from all countries.

In addition, the Royal Society is responsible for the administration of a number of Government grants and of many research funds and special funds derived from various sources. These funds and grants are used for the promotion of science through research, publications, congresses, the award of medals, lectures, and in many other ways. The highest honour bestowed by the Society is the Copley medal, for which scientists of all nationalities are eligible.

The Royal Society of Arts (properly, the Royal Society for the Encouragement of Arts, Manufactures and Commerce) has a character at once scientific, artistic, technical, industrial and commercial. Since its foundation in 1754, however, one of the society's principal objects has been to promote the progress and application to useful ends of all departments of science. Today it fulfils this purpose chiefly by the dissemination of new scientific knowledge. The society regularly holds meetings for the delivery of lectures, and publishes a monthly *Journal*, thus providing effective media for the exposition and assessment by leading authorities of developments which have a public as well as a specialist interest.

The Royal Institution was founded in 1799 as a public body for facilitating the introduction of useful mechanical inventions and improvements, and for teaching the application of science to everyday life. Later it undertook the 'promotion of chemical science by experiments and lectures for improving arts and manufactures', and 'the diffusion and extension of useful knowledge'. Its character, however, was largely determined by the work of Sir Humphry Davy and Michael Faraday who established a tradition of research. Today, the Royal Institution has extensive research laboratories, and lectures are given on recent developments in science and other branches of knowledge. Its library of some 60,000 books includes many early scientific works and manuscripts.

The British Association for the Advancement of Science was founded in 1831 to promote general interest in science and its applications. One of its chief activities is the Annual Meeting, attended by many young students as well as by eminent scientists. Its 14 sections cover the whole range of pure and applied science other

than medical science, and there is a division for studying the social and international relations of science. In addition to the annual meeting and in order to extend its influence, the association plans continuous activities throughout the year, in particular special lectures, exhibitions and discussions (some designed for young audiences), the publication of pamphlets, the organisation of conferences, the appointment of study groups and liaison with the press and with sound and television broadcasting services. The association has set up area committees and three lectureships for young scientists—the Kelvin, the Darwin and the Lister lectureships, dealing respectively with the physical, biological and sociological sciences—to encourage scientists to make their activities known to wider audiences. Collaboration with other scientific organisations has always been an important function of the British Association, and it has an organised relationship with over 150 scientific bodies and learned societies. It has also played an important part in the development of science by taking or recommending action to remove obstacles to the discovery and application of scientific knowledge.

UNIVERSITIES AND COLLEGES OF TECHNOLOGY

According to a survey carried out by the Ministry of Labour and National Service, the number of qualified scientists and engineers (i.e. holders of degrees or diplomas, or members of certain professional institutions) in employment in Great Britain at the beginning of 1956 was 142,000 including some 7,000 engaged in postgraduate research at universities and on National Service. Starting from these figures the Committee on Scientific Manpower of the Advisory Council on Scientific Policy estimated that over the next ten to fifteen years the current annual output of some 10,000 qualified scientists and engineers would need to be raised to 20,000. The Government has accepted this figure as a reasonable goal and will support measures to ensure that the universities and technical colleges together will be able to produce at least this number.

The Universities

The universities carry the main responsibility for the pursuit of fundamental research and for the training of scientists. During recent years there has also been a considerable expansion of technological training and research facilities within the universities. For example, the Imperial College of Science and Technology, London, the Royal College of Science and Technology, Glasgow, and the Manchester College of Science and Technology are schools of their respective universities, providing degree and postgraduate courses. At the new Churchill College, Cambridge, 70 per cent of the students will be studying scientific and technological subjects. More than half of the students at universities are now studying some branch of science or technology.

Eighteen of the 22 universities of the United Kingdom have faculties of engineering; chemical and aeronautical engineering have been developed in recent years. Universities in industrial centres have long been renowned for studies relating to their local industries, such as metallurgy at Birmingham, Sheffield, Swansea and other centres of the metals and metal-using industries, and naval architecture and marine engineering at Glasgow, Liverpool, Durham and Southampton. In the textile areas, Manchester offers courses in textile chemistry and engineering and Leeds has specialised in courses and research in connection with the wool textile industry, including colour chemistry and dyeing. Leeds is the only university in Britain that has a department devoted to the study of leather manufacture, and Manchester offers courses in paper technology. Sheffield is unique for its depart-

ment of glass technology—the pioneer among such departments in the world.

Nearly all universities and university colleges in the United Kingdom have laboratories or research departments. About 70 per cent of the recurrent income of the universities and a very large proportion of their money for new building comes from Government sources. There is no direct departmental control and the method of administering the grant—through the University Grants Committee (see p. 166)—is designed to ensure academic freedom. The universities also receive funds for the furtherance of research from industrial organisations, foundations, and individuals as well as from the Government research councils and the autonomous industrial research associations. Leading firms in such industries as chemicals, oil, motor vehicles, textiles, electrical equipment, food, and mining provide grants for specific research projects or endow research fellowships, such as the Imperial Chemical Industries and Leverhulme Fellowships, or professorships. Among the foundations which provide similar benefactions are the Nuffield Foundation, the Ford Foundation, the Carnegie Trust, the Wellcome Trust and Courtaulds' Scientific and Educational Trust Fund. Individuals whose major contributions to universities have included provision for research facilities are Lord Nuffield, with gifts to the Clarendon Laboratory, Oxford, Lord Austin, who provided new buildings for the Cavendish Laboratory, Cambridge, members of the Wills family who financed the Physics Laboratory at Bristol, members of the Boot family at Nottingham and of the Brotherton family at Leeds.

There are several examples of continuous co-operation between industry and commerce and the universities. A notable one is the Manchester Joint Research Council, set up in 1944 by the Manchester Chamber of Commerce and the University of Manchester. This body, on which the university and chamber are equally represented, organises lectures and discussion meetings and conducts investigations into the use made of research by industry. Another is the Glass Delegation of the University of Sheffield, which is responsible for the general direction of the work of the Department of Glass Technology and is composed of members appointed by the Council of the University and representatives of firms and companies who subscribe funds for the furtherance of training and research. An example of co-operation between a Government department, an independent organisation and a university is the world's largest steerable pencil-beam radio telescope at Jodrell Bank, Cheshire, financed jointly by the Department of Scientific and Industrial Research, the Nuffield Foundation, and Manchester University, which has been responsible for its development. While the main purpose of the telescope is the study of stars, very distant nebulae and galaxies detectable only from their emission of electromagnetic waves, it is also being used extensively in the tracking of space rockets and earth satellites, and has sent the first messages reflected from the moon.

Technical Colleges

The Government's plans for a large-scale and rapid expansion of education in advanced technology (outlined in 1956 in a White Paper, *Cmd. 9703*), include the increase of advanced work at technical colleges as well as at the universities. Certain technical colleges in England and Wales, which concentrate entirely on advanced work, including postgraduate and research work, have been designated as 'colleges of advanced technology' (see p. 169). In Scotland, advanced instruction in a wide range of technologies is given at the Central Institutions (see p. 170).

Most postgraduate studentships and fellowships awarded by the Government Research Councils may be held at colleges of advanced technology and technical colleges as well as at universities.

RESEARCH IN INDUSTRY

Industrial research in Britain is conducted by individual industrial firms and organisations independently of Government aid, by co-operative Research Associations which are assisted in varying degrees by the Government, by institutes for sponsored research and by universities and some of the major technical colleges. The main nationalised industries have their own research establishments (particulars of which are given in the appropriate sections of Chapter IX, Industry), and also give financial support to organisations concerned with research into matters of interest to them. Results of an inquiry into research expenditure are given on p. 220.

Research Associations

A scheme to form industrial research associations, by which the Government associated itself with groups of firms having similar interests, was started in 1915, on the recommendation of the then newly formed Advisory Council for Scientific and Industrial Research. In 1958, there were 49 such research associations with a combined income of £6½ million, of which about one-quarter was contributed by the Government through the Industrial Grants Committee of the Department of Scientific and Industrial Research. The fiftieth research association was established in 1959. The amounts of the Government grants are related to the contributions made by the industries concerned. Among the better-known associations are the British Cotton Industry Research Association (the Shirley Institute), the British Iron and Steel Research Association, the Motor Industry Research Association and the Production Engineering Research Association.

The research associations are autonomous bodies, governed by their own councils, the large majority of whose members are representatives of industry. The councils are advised by research committees in the preparation of research programmes. The research associations make the results of their work known to their industries by a variety of methods, among which are bulletins, publications, lectures, films, training classes, exhibitions and mobile demonstration units. (For an account of other methods of communicating the results of research see p. 220.)

Institutes for Sponsored Research. A number of institutes for sponsored research have been established to meet the needs of private firms which are unable to maintain fully equipped research laboratories. In these institutes, research sponsored independently by private firms can be carried out confidentially so that the results and any patents which may arise are retained as the property of the sponsoring body. The principal institutes of this type are the *Fulmer Research Institute*, Stoke Poges, Buckinghamshire and the *Sondes Place Research Institute*, Dorking, Surrey.

National Research Development Corporation. The National Research Development Corporation (NRDC) was set up by the Board of Trade in 1949 under the Development of Inventions Act, 1948. Its primary function is to develop and exploit, in the public interest, inventions resulting from research carried out by Government departments and other public bodies. It may also develop and exploit an invention from any other source where, in the corporation's view, the public interest requires it. Under the Development of Inventions Act, 1954, the NRDC may promote or assist research to meet specific practical requirements, or may assist the continuation of research which may lead to inventions of practical importance. It is an independent body, subject only to general direction by the Board of Trade, with powers, under the Development of Inventions Act, 1958, to borrow from Government funds to a total of £10 million up to 1968. Projects

selected for development include such varied items as electronic digital computers, Merton diffraction gratings, a lightweight power unit, printed electrical circuits, towed flexible oil barges, anti-tumour agents, a machine for decorticating and ribboning jute, an ultrasonic flow meter, a new form of transport, known as the hovercraft (see photograph facing p. 190), and a hydrogen-oxygen fuel cell as a transportable source of electricity.

GOVERNMENT RESEARCH ORGANISATION

The active participation by the Government in scientific research is for the most part a development of the twentieth century, though its association with science dates back to a much earlier period.

Early Examples

In 1675, King Charles II established Britain's first State-supported research institution—the Royal Greenwich Observatory (now transferred to Herstmonceux, Sussex, see p. 214)—to correct the tables of the positions of the moon and fixed stars 'for the use of his seamen'. The Geological Survey of Great Britain, the first national institution of its kind in the world, was founded in 1835. In 1842, the Board of Inland Revenue established a chemical laboratory which eventually developed into the Laboratory of the Government Chemist, now transferred to the Department of Scientific and Industrial Research (see pp. 58 and 208–9); and in 1854 the Meteorological Office (see pp. 49–50) was established by the Board of Trade. All these Government departments were using scientific knowledge, but there was little organised effort towards the application of the discoveries made in pure science.

Evolution of the Research Organisations

Government scientific organisations, like many British institutions, evolved gradually in response to changing social and economic circumstances.

The need for research in physics and engineering, and particularly into methods of precise measurement, led to the establishment in 1900 of the National Physical Laboratory under the control of the Royal Society, with a small grant from the Treasury towards equipment and a yearly grant towards upkeep. Government recognition of the importance of scientific research and its applications was hastened by the first world war, and the Department of Scientific and Industrial Research (DSIR) was established in 1916 as a separate Government department. In 1918, the DSIR took over financial responsibility for the National Physical Laboratory from the Royal Society, but the society appoints a general board and an executive committee which supervise scientific policy.

A Medical Research Committee was appointed in 1913 to administer the research funds provided under the National Health Insurance Act of 1911. In 1920, the committee was superseded by the Medical Research Council (MRC), see pp. 209–10, established under Royal Charter and supported by a grant-in-aid provided by Parliament.

Agricultural research, in its early days, was not centrally organised. The first research institutes were founded and initially maintained by private individuals; Rothamsted Experimental Station, for example, the oldest of them, was founded in 1843 by Sir John Lawes, who personally financed it until, in 1889, he endowed it and set up the Lawes Agricultural Trust to administer the endowment. As research became more costly, Government funds were sought and obtained, though the institute remained independent. The Development Commission, set up under the

Development and Road Improvement Funds Act, 1909, recommended that financial aid should be made available from the Development Fund to 'aid and develop agriculture and rural industries by promoting scientific research'. In 1911, the Development Fund was used to promote a scheme which led to the establishment of many of the present-day agricultural institutions. In 1931, the Agricultural Research Council (ARC), see p. 210, was established by Royal Charter to be responsible for the general organisation and development of agricultural research in Great Britain. In addition to advising the agricultural departments on the programmes of the institutes and, in the early stages, acting as scientific adviser to the Development Commission, the ARC was given funds to spend at its own discretion. The ARC gradually took over the responsibilities of the Development Commission for agricultural research. The Nature Conservancy, which is concerned with the conservation of flora and fauna, was set up in 1949 (see pp. 191 and 211).

During the second world war, a Scientific Advisory Committee to the War Cabinet was created to co-ordinate defence research and civil research. This committee was replaced in 1947 by two bodies: an Advisory Council on Scientific Policy to advise the Lord President of the Council, who had come to be regarded as the minister responsible for the formulation and execution of Government scientific policy; and a Defence Research Policy Committee 'to advise the Minister of Defence and Chiefs of Staff on matters connected with the formulation of scientific policy in the defence field'.

Ministerial Responsibility for Civil Scientific Research

Responsibility for Government scientific organisation is allocated as follows:

1. The Lord President of the Council is responsible for the formulation and execution of Government scientific policy and is advised by the Advisory Council on Scientific Policy on general questions which relate to the whole field of civil science. He is responsible to Parliament for the Council for Scientific and Industrial Research, the Medical Research Council, the Agricultural Research Council, the Overseas Research Council, and the Nature Conservancy, and is chairman of the five Privy Council Committees to which they report—the Committees for Scientific and Industrial Research, Medical Research, Agricultural Research, Overseas Research, and Nature Conservation.
2. The Prime Minister is the minister responsible to Parliament for general oversight of the development of atomic energy, and appoints the members of the Atomic Energy Authority.
3. Other ministers are responsible for the scientific establishments within their own departments. The research councils are not subject to departmental control, but their advice is at the disposal of the executive departments which maintain close liaison with them.

The Advisory Council on Scientific Policy

The 15 members of the Advisory Council on Scientific Policy, who are appointed by the Lord President, include eminent scientists drawn from the universities, industry and Government service.

In order to give adequate attention to each of the subjects within its wide range of interest, the Advisory Council has established the following standing committees:

- the Committee on Scientific Manpower;
- the Scientific Library and Technical Information Committee; and
- the Committee on Overseas Scientific Relations.

Department of Scientific and Industrial Research

The DSIR is responsible to the Committee of the Privy Council for Scientific and Industrial Research. It is governed by a Council for Scientific and Industrial Research, known as the Research Council, which, under the Department of Scientific and Industrial Research Act, 1956, replaced the former Advisory Council.

The Research Council consists of as many members as the Lord President of the Council may determine; in 1959, it had a chairman and 11 members. It is charged with the organisation, development and encouragement of scientific and industrial research and with the dissemination of the results of such research. In particular, it may:

- (1) encourage and support scientific research in universities, technical colleges and other institutions;
- (2) establish or develop institutions or departments of institutions for investigation and research relating to the advancement of trade and industry; and
- (3) take steps to further the practical application of the results of scientific and industrial research.

These functions are discharged through 14 national research organisations under the Research Council's own control and direction and financed from its own Vote, and one, the Joint Fire Research Organisation, which is maintained by the DSIR and the Fire Offices' Committee; and also through the autonomous research associations. The council also makes grants for these purposes and for post-graduate instruction in science and technology to individual workers and to institutions.

Since DSIR was set up, technological changes have necessitated a measure of reorganisation. Science-based industries, such as the chemical and electrical industries, have matured and prospered; entirely new industries, such as electronics, plastics, synthetic fibres and synthetic rubber industries, have emerged. Industry, for its own purposes and on behalf of the Government, has become the largest employer of research workers. Organised teamwork has increasingly replaced individual effort in scientific research, leading to a demand for trained research workers who can both specialise and co-operate with colleagues trained in other subjects, and also for men of outstanding qualities to direct large research departments. Research projects, at the same time, have become increasingly expensive and have to be selected with more care.

The Research Council has therefore, since its appointment in November 1956, kept under review the organisation of DSIR and has announced a number of specific changes. From January 1958, the Timber Development Association (grant-aided by DSIR but otherwise financed by timber importers and others) assumed responsibility for certain work previously undertaken by the Forest Products Research Laboratory of DSIR, so that the latter might concentrate more on research leading to new developments. In July 1959, the Agricultural Research Council took over DSIR's food laboratories (the Low Temperature Research Station, the Ditton Laboratory and the Pest Infestation Laboratory) in the interests of a better co-ordination of work.

A new laboratory, the Warren Spring Laboratory, was officially opened at Stevenage, Hertfordshire, in June 1959. In view of the research now done by the fuel and power industries (see pp. 304 and 312-3), the new research station, in so far as it continues fuel research, will concentrate on the study of atmospheric pollution and of the synthesis of oil and chemicals from carbon monoxide and hydrogen. It will also conduct research on mineral processing and on subjects

(including those requiring pilot-scale investigations) which are not covered by other DSIR laboratories.

The council has also set up *ad hoc* committees to review the work of the National Physical Laboratory, and the recently renamed laboratories, the National Chemical Laboratory (formerly the Chemical Research Laboratory) and the National Engineering Laboratory (formerly the Mechanical Engineering Research Laboratory). Two other committees have been set up: a Human Sciences Committee to study especially the human aspects of equipment design and problems of training and human relations in industry; and an Economics Committee to apply economic criteria in framing DSIR's scientific research policy, and to study the economic implications of such research.

In August 1958, the Research Council announced that small steering committees, the chairmen of which are members of the council, had been set up to take responsibility for the research programmes of two of its laboratories, the new Warren Spring Laboratory at Stevenage and the National Chemical Laboratory at Teddington, Middlesex. Subsequently, two other steering committees were set up to assume responsibility for the fish research programme of the Torry Research Station, Aberdeen, and for the work of the National Engineering Laboratory, East Kilbride, near Glasgow.

In April 1959, responsibility for the Tropical Products Institute was transferred from the Secretary of State for the Colonies to the Lord President of the Council, and the institute became one of the DSIR research stations. The primary object of the change was to make the services of the institute available to countries which have achieved independence and no longer come within the scope of the Colonial Office.

In July 1959, responsibility for the Laboratory of the Government Chemist was transferred from the Treasury to the Lord President of the Council, and it became another of the DSIR establishments. The laboratory provides a wide variety of analytical, investigatory, and advisory services to all Government departments that request them, and has a statutory function as official analyst and as an adjudicator in cases of disputed analyses. In addition, it undertakes research in various fields, including the development of chemical and physical methods of analysis.

The DSIR is expanding its activities under a second five-year plan for the years 1959-64; expenditure—at £61 million—will be nearly double that of £36 million under the first five-year plan 1954-59. Expansion will continue steadily throughout the period, and for the year 1963-64 is planned to reach £14 million. The largest increase will be in scientific research grants to universities. Postgraduate awards to students will be increased by about 10 per cent each year until, in 1963-64, it is hoped that some 3,800 students will be receiving DSIR grants for research training. In the same year, DSIR support for special research in universities should reach about £1.75 million a year. Expansion of staff in the DSIR's own laboratories is to proceed at the rate of about 6 per cent a year. Grants to the 50 research associations in the DSIR scheme will be increased to over £2 million a year by 1964. The Research Council will continue its policy of encouraging industry to bear an increasing proportion of the total cost. The actual expansion of the research association movement will thus probably be proportionately greater than the increase in the Government grant. It has also been decided to devote much more attention and money to ensure that the results of research are known and applied (see pp. 220-1).

Medical Research Council

The Medical Research Council (MRC), the successor of the Medical Research Committee, was incorporated under its present title by Royal Charter in 1920.

The MRC is responsible to the Committee of the Privy Council for Medical Research, of which the Lord President is chairman and the Secretaries of State for the Home Department, Scotland, Commonwealth Relations, and the Colonies, and the Ministers of Health and of Labour and National Service are members.

The members of the MRC, appointed by the Committee of the Privy Council for Medical Research for a period normally of four years, are twelve in number. Nine members, representing different branches of medical knowledge and the fundamental sciences on which these are based, are appointed after consultation with the President of the Royal Society and with the MRC itself: on retirement, these scientific members are not eligible for immediate reappointment. Of the three lay members of the council, one must be a member of the House of Lords and one a member of the House of Commons.

The MRC's chief function is to promote scientific investigations to obtain new knowledge likely to be of value in the field of curative and preventive medicine. In planning and carrying out its research programme, the council is often assisted by special committees appointed to advise on particular subjects. Its arrangements for the support of research fall under three main headings:

- (1) investigations by members of the council's scientific staff, mostly working in the council's own research establishments;
- (2) temporary research grants to independent investigators in universities and elsewhere; and
- (3) research fellowships and scholarships for tenure both at home and abroad.

The National Institute for Medical Research, at Mill Hill and Hampstead, London, is the council's main research establishment; in addition, there are some 70 smaller establishments, generally known as research units or groups, which are attached in most cases to universities and hospitals in the United Kingdom. The council also undertakes work overseas and, with additional support from colonial development and welfare funds, maintains laboratories in the Gambia and units in Uganda and Jamaica.

The MRC administers the Public Health Laboratory Service (see p. 157) on behalf of the Ministry of Health.

Agricultural Research Council

The Agricultural Research Council (ARC) was established by Royal Charter in 1931. It is responsible to the Committee of the Privy Council for Agricultural Research, consisting of the Lord President of the Council, the Minister of Agriculture, Fisheries and Food and the Secretary of State for Scotland.

Under the Agricultural Research Act, 1956, the ARC was charged with the organisation and development of agricultural research, and an Agricultural Research Fund was established, into which are paid the parliamentary grant-in-aid and other sums received by the council, and out of which are met all expenses incurred by the council under the Act or in accordance with the terms of its charter. The accounts of the fund are audited by the Comptroller and Auditor General.

The council consists of not more than 18 nor fewer than 15 members, five of whom are appointed for their general experience of and interest in agriculture. Others are appointed by the Committee of the Privy Council, after consultation with the President of the Royal Society, on account of their qualifications in one or other of the sciences relating to agriculture. Included in the council's membership are the Chief Scientific Adviser (Agriculture) and the Chief Veterinary Officer of the Ministry of Agriculture, Fisheries and Food, also one member appointed by

the Minister of Agriculture, Fisheries and Food and one by the Secretary of State for Scotland. The council has 23 research stations and units under its direct control in Great Britain, including three laboratories, concerned with the preservation, storage and protection of foodstuffs, transferred from the DSIR on 1st July, 1959, when the ARC assumed responsibility for Government research on food (other than fish).

It is also responsible for the financing of the independent research institutes (see p. 287) in England and Wales (but not in Scotland). The programmes of all these institutes are co-ordinated and approved by the council and are integrated with those of the independent research institutes in Scotland, which are grant-aided by the Department of Agriculture for Scotland.

The council makes grants to universities and other recognised research institutions for special investigations, and awards research fellowships and postgraduate studentships in agricultural and veterinary science, agricultural and dairy engineering and statistics.

Nature Conservancy

The Nature Conservancy was established by Royal Charter in 1949 and is responsible to the Privy Council Committee for Nature Conservation. Its functions, as summarised in the charter, are 'to provide scientific advice on the conservation and control of the natural flora and fauna of Great Britain; to establish, maintain and manage nature reserves in Great Britain, including the maintenance of physical features of scientific interest; and to organise and develop the research and scientific service related thereto'.

Research stations have been set up by the Nature Conservancy at Merlewood, Grange-over-Sands, in Lancashire, and Furzebrook, Wareham, in Dorset, and field stations at Moor House, Westmorland, and at Anancaun, Ross-shire, where long-term ecological research is undertaken into such problems as the relation of vegetation to soils and climates, peat growth, effects of grazing and of moor burning, coastal erosion, roadside spraying and the spread of myxomatosis. Grants are made for research, and the Nature Conservancy awards annually a number of postgraduate studentships.

Atomic Energy

Before 1946 the Department of Scientific and Industrial Research was responsible for atomic energy research and development. From 1946 to the end of 1953 this responsibility rested with the Minister of Supply. Because of its growing industrial applications, however, the Government decided to transfer responsibility for atomic energy from the Minister of Supply to a non-departmental organisation. As a result, in January 1954, ministerial responsibility (except for weapons production) was transferred to the Lord President of the Council; and the Atomic Energy Authority Act, 1954, established the United Kingdom Atomic Energy Authority (UKAEA) which, in August 1954, took over responsibility, under the Lord President, for atomic energy research and development. In April 1957, the Prime Minister assumed, by Order in Council, general responsibility for atomic energy in place of the Lord President.

The Prime Minister is assisted by a small department, the Atomic Energy Office, which is responsible among other things for international aspects of atomic energy in co-operation with the Foreign Office and Commonwealth Relations Office. The Minister of Supply is responsible for the development and production of atomic weapons for the Services in accordance with agreed defence policy; in practice, however, the Atomic Energy Authority produces the explosive nuclear material and

the assemblies for atomic weapons under contract and carries out weapon research. The Minister of Power (in Scotland the Secretary of State) has a general responsibility for the civil nuclear power programme; the power stations are being built and will be operated by the electricity authorities. The Admiralty is concerned (in close collaboration with the Atomic Energy Authority) in the development of nuclear power for naval propulsion, and has a general responsibility for the application of nuclear propulsion in merchant ships. The Authority collaborates with a number of other Government departments—the Ministries of Health, Labour and National Service, Housing and Local Government, Agriculture, Fisheries and Food, Transport and Civil Aviation, the Post Office, and the Home Office—on various aspects of health and safety in relation to atomic energy.

Expert advice on radiation hazards is provided by the Medical and Agricultural Research Councils and by the Radioactive Substances Advisory Committee. This committee advises ministers on the administration of the Radioactive Substances Act, 1948, which deals with the restrictions necessary on the use of radioactive substances and apparatus producing radiation.

The Atomic Energy Authority

The Atomic Energy Authority, members of which are appointed by the Prime Minister, may consist of not fewer than eight and not more than eleven members, including the chairman.

The authority, like other statutory public corporations, is free from day-to-day Government control (subject to the power given to the responsible minister to issue directions to the authority in matters of over-riding national importance), but differs from them in that the bulk of its revenue is derived from money voted by Parliament and in that its accounts are certified by the Comptroller and Auditor General.

The organisation is divided into four groups controlling various establishments and has a London office which is responsible for central financial, administrative and establishment matters, and for raw material procurement.

The *Research Group*, centred at Harwell, Berkshire, conducts research into all aspects of atomic energy. Much of its work is of a fundamental nature without direct regard to particular applications. Most of the applied research at Harwell is now devoted to peaceful uses of nuclear energy, although some assistance is given on specific problems relating to weapons. In addition to numerous research reactors and accelerating machines, Harwell houses *Hermes*—the largest isotope separator in Europe—and *Zeta* (Zero Energy Thermonuclear Assembly), with which remarkable progress towards the achievement of controlled thermonuclear reactions (the fusion process) was made when, in November 1957, temperatures of 5 million degrees centigrade were registered in the apparatus. Work is in progress on designs for an advanced version (*Zeta II*). It was announced in July 1959, that in order to study the basic scientific principles involved in such reactions, a new apparatus, *Icse* (Intermediate Current Stability Experiment), is to be built, which will be capable of operating at higher pressures and faster rates of increase of electric current. Such experiments in Britain and elsewhere may lead to the possibility of obtaining almost unlimited supplies of energy from hydrogen.

Construction is well advanced on a second main research centre at Winfrith Heath in Dorset, which will be concerned mainly with research into reactor design and development. It will function as an out-station of Harwell. Among projects to be built there are two high temperature gas-cooled reactors—*Zenith* and *Dragon*—the latter jointly financed by a number of member countries of the Organisation for European Economic Co-operation (OEEC), including members of the European

Atomic Energy Community (Euratom). The United Kingdom will provide the largest share and retain ownership of the *Dragon* reactor.

The research group is concerned with preparing and distributing radio-isotopes and other radioactive substances. Marketing of these materials has now been taken over by the Radiochemical Centre, Amersham, Buckinghamshire, which has been enlarged to meet a demand for radioactive products which has more than trebled since 1955. Harwell also runs an isotope school, started in April 1951, and a reactor school, started in September 1954, which provide training for home and overseas students.

The *Development and Engineering Group* is responsible for development, design and construction of reactors and associated plants (except for some development work which is undertaken by the research group); for engineering consultant work for the electricity authorities, overseas organisations and the nuclear power companies; and for the general engineering design and construction of all major building projects. The group has its headquarters at Risley, Lancashire, and it includes the Dounreay Experimental Reactor Establishment, Caithness, Scotland (housing an experimental fast-breeder reactor, a materials testing reactor and a prototype submarine reactor), the Culcheth Laboratories, Lancashire, and research and development organisations at Capenhurst (Cheshire), Windscale (Cumberland) and Springfields (Lancashire).

The *Production Group* is responsible for the operation of UKAEA factories (including the Calder Hall and Chapelcross reactors); research and development concerned with factory processes; and commercial activities taken over from the industrial power branch of the former industrial group.

The production group's headquarters is at Risley, Lancashire, and its plants are at Capenhurst, Cheshire (for the production of enriched uranium); Springfields, Lancashire (for uranium metal production and the manufacture of reactor fuel elements); Windscale, Cumberland (now being expanded as one of the national centres for the development of advanced gas-cooled reactors as well as for chemical processing); Calder Hall, Cumberland; and Chapelcross, Dumfriesshire, both of which produce plutonium and electricity, the former also housing a reactor operation school, established in 1957.

The *Weapons Group*, centred at Aldermaston, Berkshire, conducts research on and development of nuclear weapons, including the explosion of test weapons, both under Ministry of Supply contract and in its own right. The group also carries out research work on controlled thermonuclear reactions.

National Institute for Research in Nuclear Science

In February 1957, the Government set up a National Institute for Research in Nuclear Science, which provides, for common use by universities and others, facilities and equipment which are beyond the scope of individual universities and institutions carrying out research in the nuclear field. It does not replace the research already being done in individual universities with assistance from Government funds; nor does it affect the Government's participation in the international scheme for common facilities set up in Geneva under the auspices of the European Organisation for Nuclear Research (CERN). The institute is financed in the main by grants through the Atomic Energy Authority from the Atomic Energy Vote. The Rutherford High Energy Laboratory at Harwell, which will house the institute's proton synchrotron (particle accelerator), is nearing completion. This 7,000 million electron volt apparatus will be one of the largest such machines in the world.

Other Government-sponsored Scientific Research

All departments rely on one or other of the Government research councils for scientific advice. While some use these bodies as their main source of scientific information, a few have set up supplementary research organisations of their own.

Defence Research with Civil Applications

Research and development undertaken by the Admiralty is primarily directed to meeting the requirements of the Royal Navy, but a substantial amount of this work has important civil applications. For instance, the Admiralty is sponsoring research into nuclear propulsion for ships both for the Royal and Merchant Navies, and is responsible through the Royal Naval Scientific Service for inter-Service electronic valve research and development. The research activities of the Royal Greenwich Observatory, at Herstmonceux, and the National Institute of Oceanography, which are mainly in the civil field, are also administered by the Admiralty. At the former, the 98-inch Isaac Newton optical telescope is to be built which will be the largest in Britain.

The Ministry of Supply carries out research needed to meet the technical requirements of defence and is also responsible for some civil research, e.g., at the Royal Aircraft Establishment, the National Gas Turbine Establishment at Farnborough, and the Royal Radar Establishment at Malvern. Some fundamental research is also carried out for the ministry by universities and industrial organisations.

The Air Ministry finances the Meteorological Office which is responsible for research in meteorology and geophysics, mainly directed to non-military ends. The Forecasting Research Section has recently been equipped with a large-capacity electronic computer. Balloon and aircraft soundings and radar techniques are used to investigate the movement and composition of the atmosphere. The Air Ministry also makes grants for fundamental meteorological research carried out under the auspices of the Royal Society or in university departments. The three main divisions of the Meteorological Office—at present in London, at Harrow (Middlesex), and at Dunstable (Bedfordshire)—will soon be transferred to a new building under erection at Bracknell, Berkshire.

Agriculture

Apart from research at the centres controlled or grant-aided by the Agricultural Research Council and the Department of Agriculture for Scotland, the Ministry of Agriculture, Fisheries and Food conducts research in its own veterinary laboratories at Weybridge, Surrey, and at Lasswade, Midlothian, Scotland, and also at its plant pathology laboratory at Harpenden, Hertfordshire; at its infestation control division at Tolworth, Surrey, it conducts research into problems affecting the destruction and control of insect pests of stored food, rodent pests and other animal and bird pests. Limited research in entomology and helminthology is carried out by the Department of Agriculture for Scotland at its plant pathology laboratory in Edinburgh. In Northern Ireland, research in all the major agricultural sciences is carried out in conjunction with the Ministry of Agriculture.

Fisheries

The authorities concerned with fisheries research are: the Ministry of Agriculture, Fisheries and Food, which maintains four laboratories for marine, shell-fish, salmon and freshwater fisheries research, and four research vessels; the Scottish Home Department, which maintains a marine research laboratory, four research ships at Aberdeen, and a freshwater research laboratory at Pitlochry; and the Development Commissioners.

The Development Commissioners, through their Advisory Committee on Fishery Research, co-ordinate all fishery research. From the Development Fund a number of independent institutions receive grants for marine and freshwater research.

Food

The Division of the Chief Scientific Adviser (Food) of the Ministry of Agriculture, Fisheries and Food, advises the minister on all scientific and technical aspects of departmental food policy, identifies problems in food procurement, processing, utilisation and distribution which require investigation, and arranges for such investigations to be made at appropriate research centres. It also promotes the application of the results of research either directly or in co-operation with the food industries concerned. To help in doing so, it has experimental laboratories and kitchens in London and an experimental factory at Aberdeen. The division is grouped into three sections dealing with nutrition, food technology and food in relation to defence.

Forestry

The Forestry Commission undertakes experimental work relating to silvicultural and allied problems. By means of grants, it also aids forest research work undertaken by various universities and other institutions, including the Imperial Forestry Institute, Oxford.

Fuel and Power

The Minister of Power is responsible for research on safety in mines and also plays an important part in research into the efficient utilisation of fuel. The nationalised coal, electricity and gas industries are required to submit their research plans for his concurrence, and there is close collaboration between the Ministry of Power, the scientific departments of these industries and the Department of Scientific and Industrial Research. Oil companies themselves carry on extensive research into petroleum products (see p. 306).

Transport

The Ministry of Transport and Civil Aviation is concerned with research into aspects of marine navigation, marine propulsion, road construction and airport operations, but most of the basic work is carried out for the ministry by the Admiralty, the Department of Scientific and Industrial Research and the Ministry of Supply. Research on radio aids for marine navigation, for instance, is undertaken by the Admiralty.

Land Use and Planning

The Ministry of Housing and Local Government is responsible for policy relating to the use and development of land in England and Wales. The ministry deals with technical planning and geographical, geological, economic and sociological research. Similar arrangements are made for Scotland by the Department of Health for Scotland. The Ministry of Health and Local Government is responsible for the general administration of the planning legislation in Northern Ireland.

Building

The Department of Scientific and Industrial Research is responsible for reviewing the whole field of research and technical development of the building industry, and the Ministry of Works for ensuring that the results of research are made available to the industry.

Communications

The Post Office undertakes scientific research on a wide range of subjects relating to telephone, telegraph and radio systems which is carried out by the engineering department. Examples of such research are the gradual introduction of automatic dialling for long-distance telephone calls, and the progressive mechanisation of postal operations. It also undertakes the experimental development of radio transmitters and receivers for Post Office services and other Government departments. Development in the application of electronics for the telephone services is being planned in conjunction with industry through the Joint Electronic Research Committee. The Post Office keeps in close touch with the British Broadcasting Corporation (BBC) and the Independent Television Authority (ITA) in connection with the development of broadcasting techniques.

Medicine and Health

In addition to the work carried on under the aegis of the Medical Research Council, the Ministry of Health may conduct and promote research into the cause, prevention and treatment of illness.

The Department of Health for Scotland has similar responsibilities, in the discharge of which it is advised by its Advisory Committee on Medical Research; liaison with the Medical Research Council is also maintained.

In Northern Ireland, the Hospitals Authority (a statutory body set up by the Minister of Health and Local Government) has power to conduct or assist medical research. In addition, it has a statutory duty to provide adequate bacteriological and pathological services.

The General Register Office carries out research in four main fields: (1) analysis and interpretation of statistics of causes of death; (2) statistical inquiry into the treatment of cancer and its results; (3) morbidity as revealed in hospital statistics; and (4) mental health.

Colonial Research

The bulk of the research work relating to colonial development is done in the colonial territories, but much of it requires close collaboration with research institutes and laboratories in Britain. A research council co-ordinates the work of specialist committees and advises on general questions of policy, particularly on the allocation of the funds made available to help research under the Colonial Development and Welfare Acts. Specialist bodies deal with research into such subjects as agriculture, animal health, forestry, medicine, social science and colonial products.

Anti-Locust Research

An example of Britain's research work on behalf of colonial territories is provided by the Anti-Locust Research Centre in London, which has been internationally recognised as a world centre for locust research since 1931. This organisation receives and co-ordinates information on locust movements and breeding from some 40 countries, undertakes scientific research into the life history and habits of the different species of locust, and investigates and develops methods for their control and destruction. In co-operation with the United Nations Food and Agriculture Organisation (FAO), it provides an information service on the movements of desert locusts and provides forecasts of swarm movements which are distributed to the countries threatened.

Other Research Work

There are a number of scientific institutions administered by Government departments which undertake research work in addition to their other scientific activities. These include the Royal Botanic Gardens (Kew), which celebrated its

bicentenary in June 1959, and the Ordnance Survey Department, both now administered by the Ministry of Agriculture, Fisheries and Food.

The three research departments at the Royal Botanic Gardens, Kew, are: the Herbarium, concerned primarily with the classification and accurate determination of plants; the Jodrell Laboratory, for the study of plant anatomy and plant physiology; and the Museum of Economic Botany, dealing with the economic exploitation of plants. The library, attached to the herbarium, was founded in 1853; it consists of more than 55,000 botanical books, about 80,000 reprints and separately issued items and a valuable collection of over 150,000 drawings and paintings of plants.

The Ordnance Survey Department was founded in 1791 to prepare a map of Great Britain mainly for defence purposes. Its present work is chiefly civil in character (see p. 49).

Scientific Museums

The British Museum (Natural History)—an independent section of the British Museum—contains one of the world's largest collections of natural history material and is recognised as a leading research institution.

The Science Museum illustrates the development of pure and applied science in all countries, but chiefly in Great Britain which has always held a leading place in engineering, agriculture, navigation, mining, aeronautics, and in the development of industrial machinery and processes, all of which are represented in the museum's collections.

The geology of Britain is known in more exact detail than that of any other country in the world, and the Geological Survey (since 1919 an establishment of DSIR), responsible for this work, has an outstanding collection of exhibits in its Geological Museum.

These three museums are in South Kensington, London.

Important collections outside London are the Museum of Science and Industry, in Birmingham, and the Museum of the History of Science, at Oxford.

The Parliamentary and Scientific Committee

The Parliamentary and Scientific Committee was founded at the end of 1939 by members of the House of Commons and replaced the former Parliamentary Science Committee. It is one of a number of informal, unofficial, all-party parliamentary groups which have grown up spontaneously and have varying degrees of influence. Membership is open to members of Parliament of any party in both Houses, and also to nominated representatives of such non-profit-making scientific and technological organisations in Britain as may be affiliated under its constitution. Membership in 1959 comprised 185 members of Parliament and representatives of 105 scientific and technological institutions.

The committee provides, as far as possible, for a regular exchange of information between members of Parliament and scientists, and endeavours to ensure that action is taken to correct matters seen to be wrong in the light of such information.

Scientific Liaison Overseas

The history of scientific progress is essentially a story involving many nations; the organisation of a country's scientific research would, therefore, be incomplete without provision for adequate liaison with other countries.

Before the second world war, international scientific collaboration took place through the exchange of university staffs, the awards of scholarships and fellowships, the close relations existing between the learned societies in Britain and their equivalent bodies abroad, and through international conferences and congresses.

The war and the post-war period saw the emergence of a number of new developments in overseas scientific collaboration, including the exchange of scientific information. Well-known examples are the specialised agencies of the United Nations Organisation, e.g., the United Nations Educational, Scientific and Cultural Organisation, the World Health Organisation, the Food and Agriculture Organisation, and those concerned with nuclear energy, e.g., the International Atomic Energy Agency, the European Organisation for Nuclear Research (CERN) and the European Nuclear Energy Agency, in all of which the United Kingdom is playing a full part. The United Kingdom is also represented on the Governing Committee for Scientific and Technical Personnel of the Organisation for European Economic Co-operation (OEEC) and on the Science Committee of the North Atlantic Treaty Organisation (NATO), and collaborates bilaterally with a number of countries in nuclear energy. Besides agreements between the respective atomic energy authorities, there are inter-Governmental agreements with six countries, including the United States, with which collaboration is now particularly close. There are permanent representatives of the United States Atomic Energy Commission in London and of the UKAEA in Washington. Controlled thermonuclear (fusion) reactions and nuclear marine propulsion are two important subjects on which there are regular discussions and exchanges of experts.

Among the various channels through which scientific liaison is conducted are:

The British Commonwealth Scientific Offices. A feature of the war-time pattern of scientific collaboration was the establishment of scientific missions, in London by the United States and the Commonwealth countries, and in Washington by the United Kingdom and the other Commonwealth countries; the latter subsequently joined together as the British Commonwealth Scientific Office in Washington. Since 1948 the scientific offices in London of the Commonwealth countries, set up after the war, have been located in the same building, and are closely associated with the Overseas Liaison Division of the DSIR.

The Standing Committee on Overseas Scientific Relations. This is a committee of the Advisory Council on Scientific Policy which was set up after the war to consider and advise on United Kingdom Government policy on matters of overseas scientific relations. In view of the Government's increasing interest in international organisation for scientific co-operation, the committee was reconstituted in 1958 as a small committee concerned primarily with questions of policy and scientific co-operation. The chairman of the Advisory Council on Scientific Policy acts as its chairman, and its secretariat is provided jointly by the Office of the Lord President of the Council and the Overseas Liaison Division of the DSIR.

The Overseas Liaison Division of the DSIR. This division, in addition to its executive work for the Committee on Overseas Scientific Relations, is also responsible for the administration of the United Kingdom scientific missions in Washington and Bonn, the offices of the scientific attachés in Paris, Stockholm and Moscow (the latter was appointed in April 1959), and of any further posts which may be created, and for ensuring that information collected by them is effectively disseminated in the United Kingdom. Both the missions and attachés and the overseas liaison division itself have interdepartmental responsibilities, although the division is placed within the DSIR for convenience of organisation.

Commonwealth Agricultural Bureaux. Machinery exists in the Commonwealth Agricultural Bureaux for liaison in the field of agricultural science between countries of the Commonwealth. In the United Kingdom there are ten bureaux, specialising in various branches of agricultural science, and two institutes—the

Commonwealth Mycological Institute and the Commonwealth Institute of Entomology. A third institute, the Commonwealth Institute of Biological Control, has its headquarters in Ottawa, Canada. The bureaux collect, collate and disseminate information resulting from agricultural research.

The British Council. The British Council fosters closer co-operation between British scientists and scientists of other countries, and promotes a better understanding of Britain among overseas specialists by disseminating a knowledge of British activities and achievements. Besides arranging lecture or advisory tours overseas by eminent British scientists, the British Council, among many activities of a similar nature, brings to the United Kingdom every year a number of senior overseas specialists, postgraduate students and technologists on visits of varying duration, for the purpose of study in British universities and other institutions, or for discussion with British experts. In addition to publishing the *British Medical Bulletin*, intended primarily to keep overseas specialists informed of progress in medical research in Britain, the council maintains an extensive and much used specialist information service. In some 70 countries in which the British Council is represented, libraries are maintained and in many instances these have strong sections of scientific and technological literature.

The British Council maintains at its headquarters specialist departments for medicine and science (including agriculture and engineering), while in some countries scientists are attached to its overseas representatives. The British Council is advised by eminent scientists who serve on its Science Advisory Committee and on specialist panels for the different subjects.

Overseas Research Council. The Government established the Overseas Research Council in July 1959. The council is under the general control of a Committee of the Privy Council and its principal functions will be to formulate policy in respect of scientific research for overseas and to co-ordinate advice and assistance on research matters provided by the United Kingdom research councils. Matters concerning scientific development in the United Kingdom dependencies, in Commonwealth countries and in countries outside the Commonwealth can all be referred to it. The council thus provides a central point to which Commonwealth Governments and research institutions can refer for advice and information, and advises generally on United Kingdom co-operation in scientific research overseas.

Contribution to the International Geophysical Year

The United Kingdom took a leading part in the International Geophysical Year (IGY), in which scientists of some 60 nations participated in an internationally planned and co-ordinated attempt to extend and intensify observation of the physical phenomena of the Earth. The observational phase of the IGY ran from mid-1957 until the end of 1958, and the analysis of observations made will proceed during the next few years. A number of important posts connected with this project, including that of president of the special committee controlling all IGY operations, were held by United Kingdom scientists.

The Royal Society of London planned a co-ordinated research effort by Government departments, universities and other institutions with the aid of Government grants, totalling about £650,000. Nearly half the United Kingdom contribution was spent on the IGY Antarctic Expedition, and other work included studies of the upper atmosphere from stations in the United Kingdom and its dependent territories. The Commonwealth Trans-Antarctic Expedition, financed partly by the various Commonwealth Governments and partly privately, operated independently of the IGY but contributed to it. On 2nd March, 1958, the expedition

completed the first crossing of Antarctica by land. British-built instruments were used all over the world during the IGY; and in Britain itself, the Jodrell Bank radio telescope, among many other instruments, was used to provide data.

Space Research

In May 1959, the Prime Minister announced that the Government had approved a programme for the design and construction of instruments to be carried in earth satellites. The programme is to be under the supervision of the Lord President of the Council. The Lord President has set up a Steering Group on Space Research to co-ordinate the Government's research effort in this field.

The British National Committee on Space Research, appointed by the Royal Society, is responsible for the scientific programme for instrumentation of rockets and satellites, and co-operates with the Committee on Space Research (COSPAR), formed by the International Council of Scientific Unions.

Expenditure on Research and Development

A review of the pattern of the research and development effort in Great Britain, published in the report of the Advisory Council on Scientific Policy for 1956-57, *Cmnd.* 278, indicated that in the year 1955-56 Britain spent about £300 million on research and development (though this figure is subject to a margin of error). Of the total expenditure, some £185 million, or 62 per cent, was spent by private industry, mainly on Government account. Nationalised industries were estimated to have spent £4 million.

The survey also showed that, according to the most reliable estimates available, about 46,600 professionally qualified scientists and engineers were engaged on research and development in the United Kingdom, including about 2,200 research workers in agriculture and medicine. About half of these are employed by private industry and slightly more than one-tenth by the defence departments.

These estimates, in so far as they concerned industry, were based on the preliminary results of an inquiry conducted by DSIR, a description of which, with final results, was published by DSIR in December 1958. The largest expenditure was by the following industries: aircraft (44 per cent); electrical engineering (18 per cent); chemicals (13 per cent); and shipbuilding (8 per cent).

Communicating Results of Research

The dissemination of the results of research to other research workers and to ultimate users has become a problem of some magnitude as the volume of information has grown. It is necessary, therefore, to supplement the methods generally in use—publication in learned and specialised journals, abstracting services, exhibitions, conferences, press, radio and television—by more extensive measures.

The DSIR devotes approximately a quarter of its resources to information services. The Information Division at DSIR headquarters in London supplements the information work done at its research establishments and promotes information activities of various kinds. The Lending Library Unit in London (LLU), added to these services since 1957, will be the nucleus of a new National Lending Library for Science and Technology, which is to be set up at Thorp Arch, near Boston Spa, Yorkshire, in 1961. The new library will cover all subjects in science and technology other than some branches of medicine; it will also take over responsibility for the lending service now provided by the Science Museum Library. Another important activity is an increase in translations of Russian scientific literature. A new *LLU Translations Bulletin*, the first issue of which appeared in January 1959, contains lists of books, journals and other scientific papers which are now available or which

are to be translated in the near future. The LLU collaborates with the National Science Foundation of the United States, and it holds microfilm copies of that organisation's translations of Russian scientific literature which may be borrowed. The LLU has also started to collect Chinese scientific literature.

The Association of Special Libraries and Information Bureaux (ASLIB), see also p. 229, runs a technical information department and maintains a Commonwealth index of translations and a panel of 135 translators. The Commonwealth Agricultural Bureaux provide abstracts and an information service for agricultural science. The Agricultural Research Council publishes an *Index of Agricultural Research in Progress*, and in its annual reports gives accounts of developments in current research.

THE PROMOTION OF THE ARTS

The preservation of Britain's cultural heritage and the promotion of literature and the arts are the active concern of a number of official and unofficial bodies. There is no Ministry of Fine Arts or equivalent organisation to formulate or administer policy in the arts, though bodies such as the Standing Commission on Museums and Galleries and the Royal Fine Art Commissions for England and for Scotland act in an advisory capacity. Government interest in the arts is expressed mainly through the provision of grants to such bodies as the Arts Council, the British Council (see also footnote on p. 172), the British Film Institute, and the Council of Industrial Design, and also to the national museums and art galleries.

Government expenditure on the arts (which, in 1938-39, amounted to a little more than £900,000) is now some £7 million. Of this total, about £3 million is the cost of the national art collections in museums and art galleries, £1.2 million the amount of the grant to the Arts Council, and more than £1 million is expenditure on preserving historic houses and their contents. In addition, under the Local Government Act, 1948, local authorities may use part of the revenue from the rates for the encouragement of the arts. Local education authorities also make grants to some schools of art, music and drama. In Northern Ireland, the Council for the Encouragement of Music and the Arts (CEMA) receives a grant of £25,000 from the Northern Ireland Government.

Unofficial institutions concerned with the promotion of the arts include many charitable trusts and foundations, e.g., the Carnegie United Kingdom Trust, the Pilgrim Trust, the United Kingdom branch of the Calouste Gulbenkian Foundation, and a large number of societies, associations and other organisations concerned with separate aspects of the arts, some of which are mentioned later in this chapter.

A development since the second world war has been the increasing support the arts are deriving from business firms. In recent years, such industrial patronage has amounted to some £50,000 annually. In addition, the Independent Television programme companies (see Chapter XIV) are spending jointly about £100,000 a year on the encouragement of the arts. A co-ordinating committee has been set up to ensure that the donations of the individual companies do not overlap.

The Arts Council of Great Britain was established under a Royal Charter in 1946. It consists of not more than 16 honorary members appointed by the Chancellor of the Exchequer in consultation with the Minister of Education and the Secretary of State for Scotland. Its main duties are to increase the accessibility of the fine arts to the public, to improve the standard of execution in the fine arts, and to advise and to co-operate with Government departments, local authorities and other organisations on any matter connected directly or indirectly with these aims. The corresponding body in Northern Ireland is CEMA, the board of which consists of

members nominated by the Minister of Education for Northern Ireland and the Senate of Queen's University, together with members elected by the Association of CEMA.

The Carnegie United Kingdom Trust was founded in 1913 by the late Andrew Carnegie. It was incorporated under Royal Charter in 1917. The trust, which was initially founded for 'the improvement of the well-being of the masses of the people of Great Britain and Ireland', consists of 25 life trustees, 6 trustees nominated by the Corporation of Dunfermline and 3 trustees nominated by the Fife County Council. Its cultural policies include the support of adult amateur activities in music, drama and the visual arts. It also assists non-national museums. Grants totalling £20,626 were made for these purposes during the year ended 31st December, 1958.

The Pilgrim Trust was founded in 1930 by the late Edward Stephen Harkness, an American citizen. The trust, which has an income of about £170,000 a year, is administered by a body of trustees who are empowered to make grants towards any legally charitable object within the United Kingdom. In fact, the greater part of the trust's income is at present being used to help to preserve the nation's heritage of architecture and history, and for the advancement of learning and the arts. The grants made for these objects during 1958 amounted to £169,770.

The Calouste Gulbenkian Foundation of Lisbon was established under the will of the late Calouste Gulbenkian who died in 1955. The foundation has a branch in the United Kingdom, which is responsible for the foundation's activities in Britain and in other Commonwealth countries. During 1958, grants totalling £94,000 were made to the arts in the United Kingdom. A small private committee, under the chairmanship of Lord Bridges, was set up by the foundation to examine the needs of the arts in Britain and reported to the trustees in June 1959. It recommended that greater support should be given to the arts, that there should be more scope for experiment, that the arts should be made more accessible to the public, particularly in the provinces, and that more should be done to foster appreciation of the arts among the young.

VISUAL ARTS

There are at present a number of British painters and sculptors of international repute as well as younger artists of great promise; and public interest in their work and that of their contemporaries overseas, as well as in that of British and foreign artists of the past, is increasing. This wider interest in visual art has not stopped at appreciation. There is evidence of this fact in the large numbers attending evening art classes, the growth of local art groups and local exhibitions, and the support given to holiday painting schools.

The fine arts of painting and sculpture in Britain receive State support by grants to national institutions and, indirectly, through grants made to the Arts Council, to municipal art galleries and museums, and to local education authorities for art schools and other means of promoting education in art.

In the year April 1958 to the end of March 1959 the Arts Council arranged 101 separate art exhibitions in Great Britain; 431 showings of these exhibitions were given in 217 different centres. In Northern Ireland, 33 exhibitions were arranged by CEMA. Knowledge of Britain's fine arts is fostered overseas by the British Council by means of exhibitions, the dissemination of reproductions and photographs, lectures, and the provision of information and advice to inquirers abroad and to visitors in Britain. In the year ended March 1959, 27 fine art exhibitions organised by the council were shown in 36 countries. The council was also

responsible for British participation in six international exhibitions. Since 1948, 23 international awards have been won by British artists.

Museums and Art Galleries

There are in all about 900 museums and art galleries open to the public in the United Kingdom, though many are only small collections or merely a few rooms set aside in a public building for the display of local treasures.

The national museums and art galleries in London probably contain between them the most comprehensive collection of objects of artistic, archaeological, scientific, historical and general interest ever to exist within one city. The British Museum, which celebrated its bicentenary in 1953, has unparalleled collections of archaeological and ethnographical material from every part of the world, in addition to housing the national library of printed books, manuscripts, newspapers and periodicals; its Department of Prints and Drawings also possesses collections of the widest extent and richness. The Victoria and Albert Museum contains works of fine and applied art of all countries and periods, arranged mainly according to material, though since the war primary collections have been arranged to bring together, by style, period or nationality, masterpieces of all the arts. The National Gallery presents paintings by almost all the greatest European masters. The Tate Gallery embodies two collections: the British school from the eighteenth century onwards, with a few earlier works, and modern foreign schools since 1850. Both sections include modern sculpture. Frequent loan exhibitions are held in the Tate Gallery.

Other important collections in London are at the National Portrait Gallery, the Imperial War Museum, the National Maritime Museum at Greenwich, the Public Record Office Museum, which contains Domesday Book and other famous historical documents, the London Museum (reopened in Kensington Palace in 1951), where the collection illustrates the history of the capital, and Hertford House, where the Wallace Collection (furniture, armour, *objets d'art* and paintings, mainly French works of the seventeenth and eighteenth centuries) is housed.

The Ministry of Education is responsible for the administration of the Victoria and Albert Museum and the Science Museum.¹ The other national collections are financed from Government funds. Besides meeting the administrative costs, this finance takes the form of annual purchase grants, which have been substantially increased for the year 1959-60, and of special *ad hoc* purchase grants. The collections also receive certain pre-eminent works of art acquired by the Treasury in lieu of estate duty. The buildings are maintained by the Ministry of Works.

There are five national museums and art galleries in Edinburgh: the National Museum of Antiquities of Scotland, the National Gallery of Scotland, the Royal Scottish Museum, the National Portrait Gallery of Scotland, and the Scottish United Services Museum; a sixth, the Scottish National Gallery of Modern Art, will be opened to the public in 1960. The National Museum of Wales, in Cardiff, has a branch at St. Fagan's Castle where the Welsh Folk Museum is housed. A Northern Irish Folk Museum is being established in Belfast. The Belfast Museum and Art Gallery is municipally owned, but serves unofficially as a national institution for the whole of Northern Ireland; plans are well advanced, however, for the establishment of a national museum and art gallery, in addition to a small Belfast art gallery under the control of CEMA.

The Government is advised on questions relating to the most effective development of the national institutions as a whole, and on their co-operation with

¹ For information on the scientific museums, see p. 217.

provincial institutions, by the Standing Commission on Museums and Galleries, set up in 1931. The Standing Commission publishes a report every five years.

Almost every city and large town has a museum devoted to art, archaeology and natural history, usually owned by the municipal authority but sometimes by a local learned society or privately by individuals or trustees to whom some rich collector in the past has bequeathed his treasures. Both Oxford and Cambridge are rich in museums—the Ashmolean Museum in Oxford, founded in 1683, is the oldest in the country and the Fitzwilliam Museum in Cambridge has fine art galleries and a notable collection of engravings, manuscripts and books bequeathed by its founder on his death in 1861. Other universities have important collections, primarily for teaching purposes but also open to the public. Other cities with important museums and art galleries are Birmingham, Bristol, Glasgow, Leeds, Leicester, Liverpool, Manchester, Norwich, Southampton, and York where the Castle Museum, with its complete reconstruction of an eighteenth-century street of shops, offers a most interesting historical display. In recent years there has been a notable development of 'period-house museums', in which outstanding examples of the private residences of former times have been taken over by national and municipal authorities for this purpose, as at Temple Newsam, Leeds; Aston Hall, Birmingham; and the Royal Pavilion, Brighton. Private art collections are to be seen in the historic family mansions (including many in the ownership of the National Trust) which are now open to the public at certain times.

In 1959, the first regional museum service in Britain was inaugurated for the south-west. Its objects are to promote closer co-operation between museums and art galleries in the region, to improve technical facilities, and to provide financial assistance.

Financial assistance for improving the displays of the smaller museums is among the functions of the Carnegie United Kingdom Trust, which has done much to encourage the growth of the museum movement during the past thirty years, and at present expends an average of £10,000 a year for this purpose.

The Museums Association, founded in 1889, is an independent organisation to which museums and art galleries and their staffs throughout the country belong; there are also many overseas members. The association serves as a central body for the collection of information and the discussion of matters relating to museum administration, and as a training and examining body for professional qualifications. It also produces directories, a monthly journal, and other publications.

Temporary exhibitions produced by the Arts Council, the Art Exhibitions Bureau, and the Circulation Department of the Victoria and Albert Museum, are a regular feature of many museums.

The various national art exhibiting societies include the Royal Academy, which, in summer, holds exhibitions of works by members and non-members and, in winter, exhibitions usually devoted to national schools of painting; the Royal Scottish Academy; the Royal Society of British Artists; the Royal Institute of Oil Painters; the Royal Society of Painters in Water Colours; the Royal Society of Portrait Painters; the Women's International Art Club; and the London Group (all the foregoing are associations of professional painters); and the Institute of Contemporary Arts. Some of these societies, notably the Royal Academy at Burlington House, have their own galleries in London. There are, in addition, many regional societies such as the Royal Ulster Academy of Arts, while an increasing number of amateur art societies throughout the United Kingdom hold local exhibitions and encourage local interest in the fine arts in a variety of ways. The Contemporary Art Society uses its members' subscriptions to buy modern works which it presents to the public galleries.

Exhibitions of works by old masters and living artists are held throughout the year in the galleries of the art dealers of Bond Street and other parts of the West End of London. The Whitechapel Art Gallery shows a series of important exhibitions in the East End of London; and the London County Council has shown an exhibition of modern sculpture in one of its parks every third year since the second world war. There are also exhibitions of children's art, including the National Exhibition of Children's Art sponsored by the *Sunday Pictorial*.

Art Education

There are 15 colleges of art in the United Kingdom, each serving a region, all of which offer courses in most branches of art and a varying range of crafts; and there are schools of art in nearly all the larger towns. In London, the most notable of these schools and colleges are the Royal College of Art (a national college) and the Central School of Arts and Crafts of the London County Council, in both of which the emphasis is on industrial design, and the Slade School of Fine Arts in the University of London. At the Royal Academy Schools, founded in 1768, all instruction is provided free by Royal Academicians.

The leading academic institutions for the teaching and study of the history of art are the Courtauld Institute of the University of London, the Department of Classical Art and Archaeology in University College, London, and the Warburg Institute (also a part of London University) which provides facilities for research on the character and history of the classical tradition.

Art has a place in the curriculum of every type of school, and the Society for Education through Art, among its other activities, encourages the purchase by schools of original works of art, by organising an annual Pictures for Schools exhibition. The Arts Council operates a loan scheme for reproductions of works of art which is used extensively by schools.

Industrial Design

The Council of Industrial Design was set up in 1944 by the President of the Board of Trade as a grant-aided body with the purpose of promoting the improvement of design in the products of British industry. The council has 24 members, a majority being prominent industrialists, and there is a separate Scottish committee.

The council runs a permanent exhibition, The Design Centre, in the Haymarket, London. This is a selective, changing display of well-designed British consumer goods in current production. To supplement this display, an illustrated record of good design, known as *Design Index*, is maintained at the centre. In 1957, a design centre was also opened in Glasgow. In addition, the council organises conferences, courses and exhibitions in Britain and overseas, and maintains a record of designers and a photographic and reference library on industrial design. It has an education section and a retail section and publishes a monthly magazine, *Design*.

Other bodies concerned with industrial design include the Royal Society of Arts (see p. 202), the Society of Industrial Artists, which is the representative professional body in Great Britain of designers engaged in industry and commerce, and the Design and Industries Association (DIA), founded in 1915. The DIA is a voluntary association of industrial companies, designers, and other bodies and individuals interested in the promotion of good design in industry.

Architecture

The Government's responsibility towards the nation's architecture is concerned with encouraging the best in new building and preserving, by legislation and in other ways, the best that has been inherited from the past.

The Government departments chiefly concerned with domestic architecture are the Ministry of Housing and Local Government, the Department of Health for Scotland, and the Northern Ireland Ministry of Health and Local Government, which are responsible in their respective countries for approving the layout and design of local authority housing schemes, and which issue reports and circulars setting standards for local authority housing. The Ministry of Housing and Local Government also encourages high standards by offering, each year, medals for the best-designed houses. The education departments are responsible for the supervision of building for the public education service. The Ministry of Works is the department concerned with the construction and maintenance of Government buildings and also with the preservation of historic buildings and ancient monuments in Great Britain. In Northern Ireland, responsibility for the preservation of ancient buildings is vested in the Ministry of Finance. All these departments have architects on their staffs, as have also the local authorities concerned with housing and planning.

A number of professional, advisory and other societies and institutions exist to further the interests of architecture and the preservation of buildings of aesthetic value or historic interest.

Several State-sponsored organisations are concerned with special aspects of architecture. The Royal Fine Art Commission (appointed in 1924) and the Royal Fine Art Commission for Scotland (appointed in 1927), both bodies of experts established by Royal Warrant, advise Government departments, planning authorities, and other public bodies on questions of public amenity or artistic importance; many large-scale modern buildings have had the approval of the commissions. The National Buildings Record maintains a library (open to the public for consultation) of over half a million photographs of English and Welsh architecture and an index of architectural records in public and private possession. The Scottish National Buildings Record, a department of the Ministry of Works in Scotland, carries out functions similar to those of its English counterpart. The Royal Commissions on Ancient and Historical Monuments for England, for Wales and Monmouthshire, and for Scotland, record in detail all ancient and historical remains in their countries and publish a series of surveys, designed ultimately to cover the whole of Great Britain. The Ancient Monuments Boards for England, Scotland, Wales, and Northern Ireland, set up under the Ancient Monuments Acts, consider which monuments should be listed in accordance with those Acts and advise the Minister of Works on any questions concerning ancient monuments. The Historic Buildings Councils for England, Scotland, and Wales, which were constituted under the Historic Buildings and Ancient Monuments Act, 1953, advise the minister on the provision of grants towards the repair and maintenance of such buildings and their contents (see p. 191). The Scottish Council also advises the Secretary of State for Scotland on the exercise of his functions relating to buildings of architectural or historic interest under the planning Acts. An Historic Buildings Bureau finds new uses for unoccupied historic buildings of outstanding interest.

The leading professional architectural institution in the United Kingdom is the Royal Institute of British Architects (RIBA), which holds meetings at which papers are read and discussed, publishes a journal, holds exhibitions, promotes and controls the training of architects through its Board of Architectural Education, and has one of the largest and most important architectural libraries in the world, housing over 65,000 books, periodicals and drawings. There are also the Incorporated Association of Architects and Surveyors, the Institute of Registered Architects, the Royal Incorporation of Architects in Scotland, and the Royal Society of Ulster Architects. Other societies include the Architectural Association,

the Architecture Club, and a number of societies interested in particular aspects of architecture, such as the Modular Society.

The Civic Trust, established in 1957, seeks to promote high standards in architecture and civic planning and to encourage a wider interest in the appearance of towns, villages and the countryside.

Among the preservation societies are the Georgian Group, which is a society designed to awaken interest in Georgian architecture and to save Georgian buildings from destruction; the Society for the Protection of Ancient Buildings; and the National Trust in England, Wales and Northern Ireland and the National Trust for Scotland, which together own more than a hundred houses of historic or architectural interest, many of which contain pictures and other works of art. Most of these houses, and other ancestral homes, are open to the public at a small charge and attract large numbers of visitors. The Historic Churches Preservation Trust was formed in 1952 under the chairmanship of the Archbishop of Canterbury, in order to raise £4 million to supplement the efforts of parishes to put their churches into good repair. By the end of 1958, it had made grants totalling £377,779 to 906 churches and chapels of various religious denominations.

Education in architecture is given at 23 schools of architecture recognised for exemption from the RIBA Intermediate and Final Examinations and 4 schools of architecture recognised for exemption from the Intermediate Examination only. There are also 42 schools of art and technical institutions (8 full-time) with facilities for the instruction of intending architects, which prepare students for taking externally the examinations of the RIBA. It is against the law for any person to practise or carry out work under any name, style or title containing the word 'architect' unless he or she is registered. The statutory body which regulates registration is the Architects' Registration Council of the United Kingdom.

LITERATURE

A knowledge of literature is fostered in the United Kingdom by the schools, colleges and universities of the country, in all of which English literature is taught either as part of a general course or as a specialist subject. Interest in the subject is thereafter maintained by the libraries, by the very large number of private literary societies (both national and local), by book reviews in the press and on the radio, and by the numerous periodicals concerned in whole or in part with literature, of which the best-known critical weekly is *The Times Literary Supplement*. State support for literature is given through the Arts Council, which assists poetry—especially poetry readings—in Great Britain. The British Council is active in encouraging a knowledge of English literature abroad. Recognition of outstanding literary merit is given in the form of literary prizes, a number of which are awarded annually, e.g., the two James Tait Black Memorial prizes for biography and literature, the John Llewellyn Rhys Memorial prize for young writers of promise, the Hawthornden prize for imaginative writing, the Library Association Carnegie Medal for an outstanding book for children, the Kate Greenaway Medal for the best children's book illustration and the Somerset Maugham award for young writers. The Arts Council makes triennial awards for the best books of poetry published.

Libraries

The largest library in Britain is that of the British Museum in London (more than 5 million volumes). The National Library of Scotland (over 2 million volumes) is in Edinburgh, and that of Wales in Aberystwyth (nearly 2 million volumes). Together with the Bodleian Library in Oxford (2½ million volumes) and the

Cambridge University Library (about 2½ million volumes) these comprise the 'copyright' libraries of the country and are entitled to receive a copy of each new book published in Britain: the British Museum Library must receive a copy, the other libraries may claim one.

Other great libraries include¹: the University of London Central Library,² the libraries of the universities of Edinburgh, Glasgow and St. Andrews, and Queen's University Library, Belfast; London Library (the largest public subscription library) and the John Rylands Library, Manchester; the Science Museum Library, the Victoria and Albert Museum Art Library and the British Museum (Natural History) Library; the Patent Office Library, the India Office Library and the Public Record Office (which contains the non-current records of the superior courts of law and of most of the Government departments); the libraries of the Royal Institute of International Affairs, the Royal Commonwealth Society, the Commonwealth Institute, the Royal Geographical Society, the British Drama League, the Royal Institute of British Architects, the Royal College of Music and the Royal Academy of Music; the Central Music Library; and the National Library for the Blind. The Arts Council has founded a reference library of modern English poetry, which is housed with the National Book League. The National Register of Archives, maintained by the Historical Manuscripts Commission in the Public Record Office building, contains particulars of numerous local and private records.

The public libraries of Britain maintain a service throughout the country, administered by 570 public library authorities (county councils, county borough councils, municipal borough councils, urban district councils and a few parish councils). Together these authorities provide more than 32,755 service points; they hold over 68 million books and make more than 431 million loans a year. A feature of the service in rural areas is the travelling van, which is an itinerant library.

In addition to lending books, music scores and gramophone records, and providing special libraries for, among others, children, patients in hospitals and prisoners, public libraries engage in many other activities, such as play readings, lectures, film shows, music circles and co-operation in university extension education.

A committee set up by the Minister of Education to examine the structure of the public library service in England and Wales reported in 1959. Its principal recommendations, which are now being considered by the minister, were that every public library authority should have a statutory duty to provide an efficient library service; that the Minister of Education should have general supervisory responsibilities and be assisted by an advisory body in England and Wales; that non-county borough and urban district councils which cannot satisfy the minister that they are providing an efficient library service may have their public library powers withdrawn; that greater co-operation between libraries should be encouraged; and that libraries should be provided with an increased staff of qualified and specialist librarians and, in many cases, with new or improved premises.

A feature of library services in Britain is the co-operation within the network of libraries which greatly increases the value of the service. Library co-operation is organised, in the first instance, through regional library bureaux, and is finally centralised in the National Central Library with its widespread system of outlier libraries (public, university and special) giving access to a total stock of some 21 million books and many thousand sets of periodicals. The Scottish Central

¹ This list provides only an arbitrary selection of some of the largest libraries. Unless otherwise stated these libraries are in London, where there are more than 500 libraries; and see also p. 202.

² The total holding of all the libraries (college and special) of London University is about 3 million volumes.

Library carries out, in Scotland, functions similar to those of the National Central Library.

The two principal organisations to which librarians belong are the Library Association and the Association of Special Libraries and Information Bureaux (ASLIB). The Library Association endeavours to unite librarians and governors of libraries throughout the world and, through its many meetings, conferences, personal service and publications, including its official journal *The Library Association Record*, to provide for their general and specialised professional interests.

ASLIB, which is a documentation centre and is financed by the Department of Scientific and Industrial Research, operates in a more specialised field. One of its activities, for example, is the maintenance of an index of translations, especially from Russian and German, which have been or are being made in Britain.

In addition to the services provided by public libraries, many bookshops maintain lending libraries for their customers.

Books

New books constitute the large majority of all books published annually in Britain. In the five-year period 1954–58, for example, British publishers issued an average total of over 20,000 separate titles each year, of which an annual average of only some 5,700 were reprints or new editions. In 1958, when 22,143 separate titles (including 5,971 reprints or new editions) were issued, the figures for new titles under literary subject headings were: bibliography and literary history, 335; biography, 496; essays, 90; fiction, 2,421; poetry and drama, 541.

Some books are produced as Government publications by Her Majesty's Stationery Office, which is the largest publishing organisation in Britain; the great majority of books, however, are produced by some 300 of the principal commercial publishers,¹ including the university presses, notably the Cambridge University Press and the Clarendon Press (Oxford). The Clarendon Press is part of the Oxford University Press, which also has a publishing department in London.

Leading organisations representing the interests of those concerned with book production and distribution are the Publishers' Association, the Booksellers' Association, and the Society of Authors.

Literary and Philological Societies and Institutions

Societies and institutions concerned with the promotion of literature in its various forms include: the National Book League, which encourages the reading of and an interest in books, and which holds exhibitions, including annual exhibitions of book design; the English Association, which aims at upholding the standard of English writing and speech; and the Royal Society of Literature, which is concerned with the advancement of literature. The British Academy, which is an organisation concerned with humanistic studies and has a section dealing with literature and philology, receives a grant from the Treasury.

Interest in poetry is encouraged by the Poetry Society and by various bodies such as the Apollo Society and the Company of Nine, which sponsor poetry readings and recitals. Poetry also plays an important part in various annual festivals, including the National Eisteddfod—the bardic festival held in Wales, the origins of which date back to the seventh century—the English Festival of Spoken Poetry and the Stratford-upon-Avon Festival of Poetry.

Among the specialist societies are the Early English Text Society, the Bibliographical Society, the Harleian Society, the Saltire Society, and several societies devoted to particular authors, of which the largest is the Dickens Fellowship.

¹ For total sales and exports of books in 1958, see p. 353.

There are also a number of clubs and societies, such as the Book Society and the Poetry Book Society, which exist to distribute selected new books to their members.

DRAMA

State patronage of the drama is expressed through the Arts Council (in Great Britain) and CEMA (in Northern Ireland), which grant subsidies to certain theatrical managements operating on a non-profit-distributing basis (i.e. using profits to finance future productions), provided that such managements have given evidence of serious aims and of consistently high standards of practical competence; and through the British Council, which is responsible for making the British theatre better known abroad by organising and sponsoring international tours by important companies, including the Old Vic Theatre Company and the Shakespeare Memorial Theatre Company, and by sending overseas exhibitions of theatrical design and lecturers on drama. The Treasury is empowered, under the National Theatre Act, 1949, to support the scheme for a national theatre by contributing £1 million to the cost of building and equipping a theatre, in London, which would operate under public auspices. In 1957, the entertainment duty on the living theatre (which raised about £1½ million of revenue a year) was abolished.

Professional Theatre

There are about 200 professional theatres in Britain. The centre of the professional theatre is in London, where there are some 40 principal theatres and a number of suburban theatres. With the exception of four theatres—Covent Garden, Sadler's Wells, the Old Vic and the Royal Court—these theatres are let to some 25 producing managements on a commercial basis for each production. The provincial theatres are served by productions touring either before or after London presentation, by companies specially formed for touring, and by local repertory companies. Since the second world war, several theatres in London and about a hundred theatres in the provinces have been closed. In 1958, however, the first full-scale theatre to be built by a civic authority and the first new public theatre to be built in Great Britain since 1939 was opened at Coventry. This was followed, in 1959, by the opening of the Mermaid Theatre, the first theatre to be built in London for 25 years, and by the re-opening of the Queen's Theatre, which was destroyed by enemy action in September 1940. Plans for another new London theatre, to be called the Prince Charles Theatre, are being considered by the London County Council. A new civic theatre in Nottingham is to be completed by 1962.

In addition to managements which rent theatres, there are a few companies which produce plays in theatres of their own. Among the best known of these organisations are the Old Vic Theatre Company in London and the Shakespeare Memorial Theatre Company at Stratford-upon-Avon; the latter company celebrated its centenary in 1959. In 1956, the English Stage Company was established at the Royal Court Theatre in Sloane Square, London, where it presents contemporary plays. Theatre Workshop, formed in 1945, has, since 1953, performed classical and contemporary plays at the Theatre Royal, Stratford, London, some of which have been staged subsequently in West End theatres. Local repertory companies (many of which are assisted financially and otherwise by the Arts Council or, in Northern Ireland, by CEMA) may have the use of their own established repertory theatres, e.g., the Bristol Old Vic Company at the historic Theatre Royal in Bristol, or they may tour the various towns and villages in the locality, playing from one to several nights in each place and using any building which can be made suitable for the purpose. The English Children's Theatre, a non-profit-making organisation,

presents children's plays in London and the provinces, while the Youth Theatre, consisting mainly of schoolboy actors, presents an annual Shakespearian production. The Open Air Theatre in Regent's Park, London, has presented many summer seasons of repertory, mainly plays of Shakespeare and other poetic drama. The Ulster Group Theatre in Belfast specialises in Irish drama. Inevitably, the work of repertory companies varies in quality but, generally speaking, the standard of both production and acting is high; many of the leading dramatists, producers, actors and actresses in the United Kingdom started their careers in repertory.

Theatre clubs for regular patrons are run in connection with some of the company-owned theatres. Where seats are sold only to theatre club members (e.g., the Arts Theatre, London), the plays are not subject to the normal requirement that they must be passed by the Lord Chamberlain¹ before presentation.

The Theatres Act, 1843, which deals with the licensing of theatres and plays, requires all new plays to be approved by the Lord Chamberlain, who may forbid the presentation of any play 'for the preservation of good manners, decorum, or of the public peace'. The number of plays for which a licence is refused amounts to under one per cent of the total submitted.

Both in London and in the provinces, most managers and artists are members of one or another of the professional organisations which exist to maintain the standards of the professional theatre, to regulate the industry and to promote and safeguard the welfare of those who work in it. Organisations of this kind include the London Theatre Council, the Provincial Theatre Council, the Society of West End Managers, the Theatrical Managers' Association, the Council of Repertory Theatres, British Actors' Equity (the actors' trade union), and the League of Dramatists. The trade union of theatre staffs is the National Association of Theatrical and Kine Employees.

The Society for Theatre Research brings together those interested in the history and technique of the British theatre.

Amateur Theatre

The amateur dramatic movement is widespread throughout the United Kingdom; there are thousands of amateur dramatic societies, with an active membership of some half a million. The movement is sponsored and fostered by local education authorities, by other public bodies, and by five special organisations—the British Drama League, the Standing Conference of Drama Associations, the Scottish Community Drama Association, the Ulster Drama League and the Association of Ulster Drama Festivals.

The British Drama League, which was founded in 1919, operates on a basis of affiliation and individual membership. Its many services to its members include the arrangement of courses, lectures and competitions in dramatic work; the provision of a library, which has the largest collection in Britain of plays and books on the theatre, and an information bureau; and advice on many matters connected with the stage, e.g., play-writing, production, stage management and the organisation of drama festivals. The work of the standing conference is mainly that of co-ordination between the various bodies concerned in the amateur dramatic movement. Functions similar to those of the league and the conference in England and Wales are fulfilled in Scotland by the Scottish Community Drama Association, which receives some financial assistance from the Scottish Education Department.

¹ The Lord Chamberlain, whose office dates from the fourteenth century, is the senior officer of the royal household. His functions include the licensing of theatres in London and certain towns, and the licensing of plays for public performance.

The Universities of Oxford and Cambridge have famous dramatic societies, and there are drama clubs and societies in many other universities and colleges.

Dramatic Training

Dramatic training is provided mainly in the dramatic schools and institutions of all kinds which have been established throughout the United Kingdom. Among the most important of such institutions are the Royal Academy of Dramatic Art (which was founded in 1904 and is now grant-aided by the Treasury, and which provides a two-year course in all branches of stage work), the Central School of Speech Training and Dramatic Art, the Rose Bruford School and the London Academy of Music and Dramatic Art, all of which are in or near London; and there is also the Old Vic School in Bristol.

Some form of education in drama is also provided in many schools and youth clubs in Britain, and a varying degree of recognition is given to the subject in the universities. Bristol University created a department of drama offering a course which an arts student may take as part of a general degree course; in July 1959, Bristol inaugurated the first International Festival of University Theatre to be held in Britain.

FILMS

The British public possibly visits the cinema more frequently than any other people in the world. Although cinema attendance has been declining in recent years (attendances at cinemas in the United Kingdom dropped from 1,101 million in 1956 to 754 million in 1958) and the average number of cinemas in Great Britain decreased by over 500 between 1954 and 1958, there were, in 1959, about 3,900 cinemas in Great Britain (with a total of 3.7 million seats) and another 145 cinemas in Northern Ireland. In February 1959, the first new cinema to be built in the West End of London for 20 years was opened.

Some 20 per cent of British first feature films are produced, and some 40 per cent distributed, by the two large amalgams, the Rank Organisation and the Associated British Picture Corporation, which have companies for production, distribution and exhibition. Most producers who are independent of either group make films in association with other film distributors. There are numerous companies (many of them small) which produce short films.

Cinematograph films were first shown to the public in Britain in 1896, and within ten years Britain was in the forefront of film production. This early ascendancy did not survive the impact of the first world war and, since 1914, British films have had to contend at home as well as abroad with keen American competition.

During the second world war the British cinema re-emerged with new vitality and began again to exert an important influence on film development by the production of many notable feature films depicting Britain's ordeals and achievements. These films were based on the documentary technique which had been developed in Britain from the early 1930s. British feature films in the post-war years were influenced by this trend, and realistic treatment became a characteristic of British feature production, both in dramatic films and in the light-hearted satirical comedies that won international acclaim. In recent years, this talent for realism has been successfully employed in feature films reflecting current social problems and in those based on war experiences.

The documentary film tradition in short film production in Britain goes back to 1929, when a group of directors began making factual films of a distinctive and imaginative kind on behalf of the Government, and later for commercial organisa-

tions. The war years saw a big expansion in this field and, since then, British documentary technicians have continued to produce high quality factual films which have won a number of Hollywood 'Oscars' and Grand Prix awards at the major international film festivals. An interesting recent development has been the attempt to re-interpret the documentary tradition in contemporary terms by a group of young technicians—the Free Cinema movement—and by the television film units of the British Broadcasting Corporation and the Independent Television Authority contractors.

The Government has continued to sponsor a wide range of informational films. These films are produced through the Films Division of the Central Office of Information (COI), which commissions their production by the private companies belonging to the Association of Specialised Film Producers (a national body) and to the newsreel and television organisations. They include documentary films produced to inform audiences overseas about life in Britain and social and cultural progress. These, and other films acquired from private industry and public bodies, are distributed throughout the world by British Information Services, in English and in as many as 15 other language versions.

The films produced by the COI for Government departments have included many specialised films on science, agriculture, health and industry. Films for industry, produced by the Government, the British Productivity Council and private firms, have helped to increase productivity; to the same end, many hundreds of industrial films from other countries have been evaluated, and the best of them made available to industrial audiences through the COI's Central Film Library¹ and other agencies. In 1958 and 1959, the Films in the Service of Industry festivals, held at Harrogate in Yorkshire, have provided a valuable meeting place for specialists in the production and use of films.

The Films of Scotland Committee, set up in 1936 and revived in 1954 by the Scottish Council (Development and Industry) in consultation with the Secretary of State for Scotland, promotes the production of Scottish films covering the industries and cultural traditions of Scotland.

The development of the film as an art is promoted by the British Film Institute, founded in 1933, which is financed partly by an Exchequer grant and is responsible to the Privy Council. The institute encourages the making and showing of good films and helps the public to appreciate good films. It administers the National Film Theatre in London and the National Film Archive, runs an annual summer school, and maintains a film distribution library from which films may be hired, a library of books on the film and an information service. The institute also makes grants to the Scottish Film Council, the Scientific Film Association, the University Film Council and the Society of Film Teachers, and administers a fund for the production of experimental films.

The National Film Archive contains over 17,000 films, of which at least 7,000 are feature films, besides scripts, art designs, posters and 130,000 photographic stills, selected to illustrate the history and the art of the film and as significant social and historical records.

The National Film Theatre shows films of outstanding historical, artistic or technical interest; it holds a unique position as a cinema offering regular programmes which are unrestricted by commercial considerations or by the age or nationality of the films shown. Its present building, erected on the south bank of the Thames, in London, in 1957, is the first permanent national film theatre in the world.

¹ The Central Film Library also makes available films on many specialised subjects, on hire, to schools, colleges and other institutions.

The Society of Film and Television Arts, formed in December 1958, has as its aim to improve the standard of film and television production and to stimulate public appreciation of the arts. It was formed by the amalgamation of the British Film Academy (founded in 1947 as a private organisation, representative of senior film-makers, to foster the making of creative films) and the Guild of Television Producers and Directors, with which the British Film Academy's aims and activities were closely linked.

Assistance to British Film Producers

The art of film production is a costly one which depends upon a commercially prosperous industry for its development and well-being, and needs adequate financial backing combined with freedom for the film-maker to experiment and to express his own ideas. There is no State-owned film production unit in Britain, but the National Film Finance Corporation, a statutory body set up in 1949, is empowered to lend money for film production. Its members—a chairman, a managing director, and three to five others—are appointed by the Board of Trade. Its funds (limited by statute to £8 million) are provided, up to £6 million, by advances from the Board of Trade; the remaining £2 million may be borrowed from non-Governmental sources. The corporation is financially concerned with about half the first feature films being made in British studios.

There is a levy on cinema admissions to provide a film production fund. This levy is quite separate from the entertainments duty which is a tax charged on cinema admissions (the rate of entertainments duty was reduced in 1957, 1958 and 1959). The money raised by the levy is paid out as a percentage of a film's takings, so that the more successful a film is at the box office, the more it receives from the fund. The fund was started in September 1950 on a non-statutory basis as the British Film Production Fund, known as the Eady Fund. It was based on a renewable agreement between the various trade associations, subject to Board of Trade approval. When this agreement lapsed in October 1957, the voluntary scheme was replaced by a statutory scheme with the same purpose. The Cinematograph Films Act, 1957, gave the President of the Board of Trade powers to make regulations governing the collection, by the Customs and Excise Department, of a levy from exhibitors, and the distribution of the proceeds for the benefit of British film production. The British Film Fund Agency undertakes the distribution.

To help British films meet the keen American competition, legislation passed in 1927 introduced the quota system (continued by subsequent legislation), under which a certain proportion of British films must be shown in British cinemas each year. The proportion is fixed by the Board of Trade annually after consultation with the Cinematograph Films Council, any change being effected by statutory instrument approved by both Houses of Parliament. For first feature films it has stood at 30 per cent since 1950.

Cinema Licensing and Film Censorship

The State takes no part in the censorship of films in Britain, but, by virtue of their power to grant licences, the local licensing authorities act as the final arbiters of films proposed for showing in their areas. There are over 700 licensing authorities; they are local authorities or, in some areas, magistrates. The Cinematograph Act of 1909 required, for reasons of safety, that inflammable films should be shown only on premises licensed for the purpose; it was subsequently established that licensing authorities had the right to supervise the character of the films exhibited. In judging the suitability of films for public showing, licensing authorities

rely on the judgment of an independent body, the British Board of Film Censors, to which are submitted all films (other than newsreels) intended for public showing.

The British Board of Film Censors was set up in 1912 on the initiative of the cinema industry, which wished to ensure that a proper standard was maintained in the films offered to the public. It consists of a president, a secretary, and six examiners; the latter, who include three women, are appointed by the president. The president is elected by a trade committee and is usually a man prominent in public life.

The board, which does not use any written code of censorship, may require cuts to be made before it will grant a certificate to a film; more rarely, it will refuse a certificate. Films passed by the board are placed in one of three categories: 'U' (suitable for universal showing); 'A' (more suitable for adults than children) and 'X' (suitable only for adults). A child or young person under 16 years of age may be admitted to a cinema showing an 'A' film only if accompanied by a responsible adult, and may not be admitted on any condition if an 'X' film is being shown.

Children and the Cinema

The Cinematograph Act, 1952, which came into force in January 1956, extended the scope of the 1909 Act and provided for the making of regulations by the Home Secretary to protect the health and welfare of children in relation to their attendance at film shows. Cinemas which give children's shows require a special licence from the licensing authority and the authority is able to impose special conditions on such cinemas. The British Board of Film Censors publishes at intervals a list of films particularly suitable for children and for exhibition at children's matinées. One of the women examiners is appointed for her special knowledge of children's needs.

Children's cinema clubs, providing special children's programmes on Saturday mornings, are widely organised by the cinema groups and have become very popular. An important contribution to these programmes is made by the Children's Film Foundation, which produces and distributes entertainment films specially designed for children. The foundation is a non-profit-making body set up by the British film industry in 1951 and provision is made in the Cinematograph Films Act, 1957, for the foundation to receive grants from the British Film Fund Agency.

MUSIC, OPERA AND BALLET

In Britain today, music in all its forms is drawing large audiences; and orchestral concerts, choral singing, music festivals, opera and ballet are important features of British cultural life.

The British Council has done much to make British music and ballet companies more widely known throughout the world. Tours of British orchestras, soloists and opera and ballet companies are arranged, recordings of works by British composers are sponsored, and libraries of British music (recorded and in printed score) are maintained in 68 countries overseas. At the British Council's headquarters in London, a central music reference library of music literature, scores and recorded music is maintained for the use of visitors. Distinguished musicians from overseas are invited to Britain as guests of the council to gain some first-hand experience of British music and musicians, and extensive arrangements are made to cover each individual interest.

Music

Seasons of orchestral concerts are promoted every year in all the large towns and cities of Britain, some of which have well-known concert halls. In London, the principal concert halls are the Royal Festival Hall on the south bank of the Thames, which was opened in 1951 in connection with the Festival of Britain; the Royal Albert Hall, Kensington, where the annual summer season of Promenade Concerts is given; and the Wigmore Hall, which is the principal recital centre.

Among the leading British orchestras are the London Symphony, the BBC Symphony, the London Philharmonic, the Royal Philharmonic, the Philharmonia, the Hallé (Manchester), the Royal Liverpool Philharmonic, the City of Birmingham Symphony, the Bournemouth Symphony, the BBC Northern, the Scottish National and the BBC Scottish. There are also the specialised string and chamber orchestras such as the Boyd Neel Orchestra, the Jacques Orchestra and the London Mozart Players; and a number of new orchestras which have been formed during the past few years. Many of these receive financial aid from the Arts Council and local authorities to help with the cost of maintaining ensembles, of presenting new or unfamiliar works, and of improving standards generally. The City of Belfast Orchestra is financed jointly by the Belfast Corporation and the Council for the Encouragement of Music and the Arts (CEMA).

The principal choral societies in Britain are the Royal Choral, the BBC Choral, the Huddersfield Choral, the Hallé Choir, the Liverpool Philharmonic Choir, the London Philharmonic Choir, the Bach Choir, and, in Northern Ireland, the Belfast Philharmonic Society. These and many other choral societies are associated with famous orchestras in major choral works; most of them, together with hundreds of similar choral and orchestral societies and music clubs, are affiliated to the National Federation of Music Societies, through which they are supported with funds provided by the Arts Council. Membership of the National Federation has risen to some 780 societies.

Music festivals in Britain, originating with the Three Choirs Festival held annually in Gloucester, Worcester or Hereford in rotation, have been in existence for over 200 years. The festival idea has developed considerably in recent years, and festivals of music and other arts are now held annually in many cities and towns throughout the United Kingdom. They range from the famous Edinburgh International Festival of Music and Drama, which lasts three weeks and attracts many thousands of visitors, to those, such as the Aldeburgh Festival, lasting a week or less. Among the better known are the Llangollen International Eisteddfod; the National Eisteddfod of Wales, which in 1958 formed part of the first Festival of Wales; the National Gaelic Mod, held at a different place in Scotland each year; the Cheltenham Festival, devoted to contemporary British music; the York Mystery Plays and Festival; and the Leeds and Norwich Festivals of choral music, which are held on a triennial basis. An annual international festival of folk song and dancing is held by the English Folk Dance and Song Society.

Interest in amateur music-making is increasing. It is encouraged by the work of County Music Committees,¹ which are aided by the Carnegie United Kingdom Trust and united in the Standing Conference for Amateur Music. The Rural Music Schools Association is concerned with music-making by amateurs in country districts; it brings together professional musicians, teachers, administrators and amateurs.

¹ Some of these are voluntary committees and some are local education authority sub-committees.

Professional organisations, which look after the interests of music and musicians, include the Musicians' Union, the Incorporated Society of Musicians, the Composers' Guild, and the Songwriters' Guild.

Specialised education in music is given at colleges of music, of which the most prominent are the Royal Academy of Music and the Royal College of Music in London, the Royal Manchester College, and the Royal Scottish Academy in Glasgow, all of which receive grants-in-aid. There are also the Trinity College of Music, and the Guildhall School of Music and Drama, both in London, and the School of Music in Birmingham. Youth orchestras are strongly encouraged, and children's concerts, given by symphony orchestras directed by prominent conductors, are a regular feature of the country's musical activities and have helped to develop among the youth of the community an appreciation of the world's greatest music. The National Youth Orchestra and the National Youth Orchestra of Wales, made up of the most promising members of school orchestras, are noted for their high standard of performance, as is the Students' Orchestra of Great Britain, formed in July 1958, which consists of music students.

In schools, more children are learning to play musical instruments; and nearly 120,000 candidates a year (children and other students) take the examinations of the Associated Board of the Royal Schools of Music, the largest proportion (some 82,000) choosing the piano as their instrument.

The increase in musical appreciation among the general public during recent years is shown not only by the size of the audiences for concerts and for broadcast music, but also by the fact that, of the 60 to 70 million gramophone records sold each year, the proportion of classical music, now over a quarter, is rising steadily. The National Federation of Gramophone Societies has some 350 affiliated societies.

Opera and Ballet

Regular seasons of opera and ballet are given at the Royal Opera House, Covent Garden, London, which is leased by the Government¹ to the Covent Garden Opera Trust, which was formed in 1944 to make the famous opera house the home of a national opera and ballet, and which receives a Government grant through the Arts Council, amounting to 43 per cent of its expenditure, subject to a maximum of £500,000 in any one year. The Royal Opera House has its own resident opera company and ballet company which give performances both in London and elsewhere. The opera company, which numbers about 200 and has a permanent orchestra, makes an annual tour of provincial centres. The ballet company, which in January 1957 was incorporated with the Sadler's Wells Theatre Ballet and the Sadler's Wells School to form the Royal Ballet, has a high international reputation gained in many overseas tours arranged by the British Council since 1945.

Seasons of opera and ballet are also given at the Sadler's Wells Theatre in London; a second Sadler's Wells opera company has been formed to tour opera in the provinces. At Glyndebourne in Sussex, an opera season, for which a company is specially assembled, is held every summer. Other opera companies include the English Opera Group, formed in 1947, and noted for its performances of operas by Benjamin Britten; the New Opera Company, formed in 1957 by members of the Cambridge Opera Group to produce new operas in London and give opportunities to promising amateurs and young professionals; the Handel Opera Company; Intimate Opera, which performs eighteenth and twentieth century works for small casts in any hall available; and the Welsh National Opera Company. Opera in

¹ The Ministry of Works acquired a 42-year lease from Covent Garden Properties Limited in 1949.

Northern Ireland is promoted by the Grand Opera Society of Northern Ireland. The Arts Council manages a small operatic group (Opera for All) which specialises in introducing opera to audiences who hitherto have been unfamiliar with it. There are also a number of amateur opera clubs in London and the provinces and in Northern Ireland. Among the ballet companies are the Ballet Rambert, Britain's oldest ballet company, which has discovered many distinguished dancers and choreographers, and the Festival Ballet. The work of the Irish Ballet in Northern Ireland combines traditional dancing and mime.

The Royal (formerly Sadler's Wells), the Arts Educational, and the Rambert Ballet Training Schools and the Royal Academy of Dancing are among the teaching institutions which have played an important part in raising British ballet to its present high standard.

VIII. THE NATIONAL ECONOMY

BACKGROUND

The United Kingdom ranks about 75th in size among the countries of the world, with about 0.18 per cent of the world's land area. In population, with about 2 per cent of the world's inhabitants, it ranks ninth. In density of population it is fourth: of the major countries, only Japan, Belgium and the Netherlands are more crowded; and there are eleven times as many people to the square mile in the United Kingdom as in the United States. In world trade, it ranks second, accounting for about one-tenth of the total. It takes about a fifth of the world's exports of primary products, and provides slightly less than one-fifth of the world's exports of manufactured goods.

The United Kingdom, from its own soil, provides only half of the food it needs; and—apart from coal and some low-grade iron ore—it has few natural resources; thus it is the world's largest importer of such products as wheat, meat, butter, fodder grains, citrus fruits, tea, tobacco, wool, and hard timber. In return, it is one of the world's largest exporters of ships, aircraft, locomotives, motor vehicles, electrical equipment, chemicals, textiles and most types of machinery. Few countries in the world have such a high proportion of the population living in towns (80 per cent) or such a small proportion of the working population engaged in agriculture (only slightly more than 4 per cent).

The United Kingdom is also the central banker of the sterling area, an area with a quarter of the world's population. Many countries outside the sterling area use sterling in their international transactions, and it is the currency in which about two-fifths of the world's trade is conducted.

The Economy before 1939

During the nineteenth century Britain secured a leading position as world manufacturer, merchant, carrier, banker, and investor and so was able to support a rapidly increasing population at a rising standard of living. It was Britain's commerce in cotton goods, above all, which gave it the leading position in world trade; cotton cloth provided 40 per cent of its exports in 1851. It was in this period also that the country became so largely dependent on imports: it has been estimated¹ that retained imports, which were only 12 per cent of net national income at factor cost (i.e. cost after discounting the effect of indirect taxes and subsidies) in 1820, rose to 28 per cent in 1870. (The 1958 figure was 23 per cent.)

The period from 1870 to 1890 marked the peak of British industrial expansion as compared with that of other countries. Between 1890 and 1914 growing industrial competition from Europe and North America began to make itself felt, but its effects on Britain's staple export industries, particularly cotton textiles and coal, were offset by the general rise in world trade, by the continued demand for British textiles from India and other eastern countries, and by the continued high level of overseas investment.

¹ Prof. E. A. G. Robinson, *Economic Journal*, September 1954, p. 458.

The new problems confronting British industry and trade in the twentieth century became apparent after the first world war. Textiles from India and Japan, where labour costs were lower, established themselves firmly in the large eastern markets, to a great extent replacing the higher-priced and often higher quality British product. The extension of the world demand for coal was slowed down by the increasing use of oil, while coal from the newer European mines competed severely with British coal.

In the old-established branches of the vehicles and engineering group of industries (e.g., locomotives, ships and textile machinery) world demand fell away after a brief post-war boom, and Britain failed at first to gain a compensating share of the expanding world trade in the new types of engineering products (e.g., cars and electrical goods). Most countries were tending towards self-sufficiency, and some sought deliberately to protect nascent and even established industries by sheltering them behind tariffs and (later) quotas and exchange restrictions.

Income from overseas investments and a substantial improvement in the terms of trade (the price of exports relative to the price of imports) cushioned the effect of a fall in the volume of exports, and imports remained high. The loss of export markets led, however, to a contraction of Britain's staple industries—coal, cotton, iron and steel, and the older branches of engineering. The result was heavy unemployment, the general rate of which averaged 14 per cent in the years 1921–39, reaching a peak of 22 per cent in 1932, when the slump in world trade was at its worst. In districts relying mainly on one or other of the staple industries, the rate was much higher.

After 1932, an improvement in the levels of production and employment took place, stimulated by an increase in home investment, by some revival in world trade and, after 1935, by the armament programme.

Effects of the Second World War

The second world war is estimated to have run down British domestic capital by about £3,000 million, through shipping losses, bomb damage, and arrears of industrial maintenance and replacements. It also resulted in a considerable alteration in Britain's financial and trading position, which may be summarised thus:

1. *Loss of overseas assets.* Over £1,000 million worth of overseas investments—including £428 million in North America—were sold to pay for war supplies. The income from these assets had paid for a substantial part of pre-war imports into the United Kingdom.
2. *New overseas debts.* New external debts, totalling £3,000 million, were accumulated.
3. *Terms of trade.* The price of imported raw materials rose sharply after the war, and by 1948 about one-fifth more goods had to be exported than in 1938 to bring in the same quantity of imports.
4. *Reduced exports.* By 1944, exports, curtailed as part of the war effort, had fallen to less than one-third of their 1938 volume.
5. *Smaller reserves.* The real value of the gold and dollar reserves was reduced to about half the pre-war level.
6. *World dollar shortage.* The physical destruction of the war led to an increased dependence on the part of Britain, the rest of the sterling area and many other countries on supplies of all kinds from North America. Dollar earnings by non-dollar countries were inadequate to pay for these supplies.

Post-war Developments

Since the war, the United Kingdom has experienced, with few interruptions, a steady growth in output of goods and services and a high level of employment. Invention and technological advance have combined with adaptation to shifts in world demand to produce some radical changes in the British industrial scene. Industries in which new techniques have predominated, notably the electrical engineering, aircraft, motor and chemicals industries, and new branches of machinery construction, are now contributing a significantly larger share of the total output—itsself much expanded—and providing wider employment opportunities for an increasingly skilled labour force and a growing contribution to exports.

At the same time, the United Kingdom has had to deal with some persistent economic problems; in particular, to fulfil its overseas obligations and to maintain its traditional role in world commerce and finance it has needed to achieve and maintain a substantial balance of payments surplus, and to halt the almost continuous rise in internal prices. In the initial post-war years Marshall Aid and loans from the United States and Canada helped to overcome the serious deficit in the balance of payments pending the full recovery of exports. The strong expansion in exports in later years resulted in a substantial surplus in the balance of payments, but it was not until 1958 that the surplus reached a level fully commensurate with Britain's external obligations.

A persistent rise in prices has been a feature of the past decade. It has stemmed primarily from an excessive pressure of demand on the nation's resources—exports, investment both at home and abroad, defence, and personal consumption—so that money incomes have risen faster than production. Stability of prices is a main aim of Government economic policy, and measures to remove excess demand were introduced in 1957. During 1958, retail prices were relatively stable—in part because of lower prices for imports—and this near-stability continued throughout the first half of 1959. Output and productivity showed an upward trend in the first half of 1959, giving scope for reductions in labour costs for each unit of output.

THE STRUCTURE OF THE ECONOMY

The following sections sketch briefly the salient features of the national income and expenditure of the United Kingdom in recent years, with particular reference to two problems—the balance of payments and the prevention of inflation. The sources of Tables 8 to 12 are *National Income and Expenditure, 1958*, and *Economic Survey, 1959*, Cmnd. 708.

National Income and Employment

Between 1948 and 1958, the United Kingdom gross national product (the measure of total goods and services produced at home and net income from abroad) is estimated to have risen by 93 per cent, from £10,397 million to £20,114 million. In real terms, that is after allowing for price changes, the increase has amounted to about 30 per cent over the same period; this is equivalent to an average annual advance of about 2½ per cent. Since 1955, the need to restrain demand in order to check rising prices and safeguard the balance of payments has reduced the rate of increase. In comparison with other countries, the United Kingdom's national income per head is appreciably below that of the United States and Canada and ranks slightly below that of Australia, New Zealand, Sweden and Switzerland.

Table 8 shows the distribution of total supplies of goods and services, at current prices, in 1935 and 1958, by use, divided between consumers, public authorities, investment and exports; while the diagram below shows the increase in expenditure on the gross domestic product in 1958 compared with 1954 at current market prices.

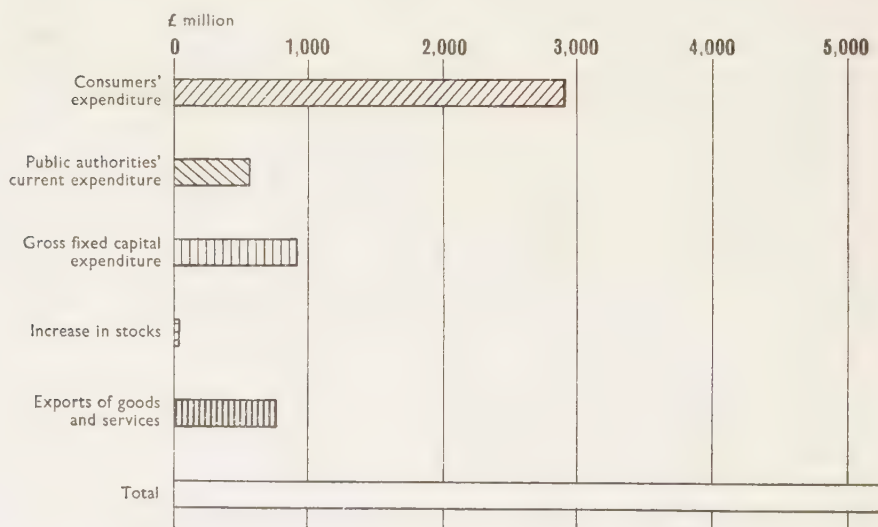
TABLE 8
DISTRIBUTION OF TOTAL SUPPLIES OF GOODS AND SERVICES
(At current prices)

Percentages

	1948	1954	1957	1958
Consumers' expenditure	61.2	56.1	54.2	55.9
Public authorities' current expenditure	12.7	14.7	13.8	14.1
Gross fixed capital formation	10.4	12.1	13.1	13.2
Investment in stocks	1.3	0.2	1.4	0.3
Exports of goods and services	14.4	16.9	17.5	16.5
TOTAL FINAL EXPENDITURE	100.0	100.0	100.0	100.0

INCREASE IN EXPENDITURE ON GROSS DOMESTIC PRODUCT

1958 compared with 1954 at current market prices

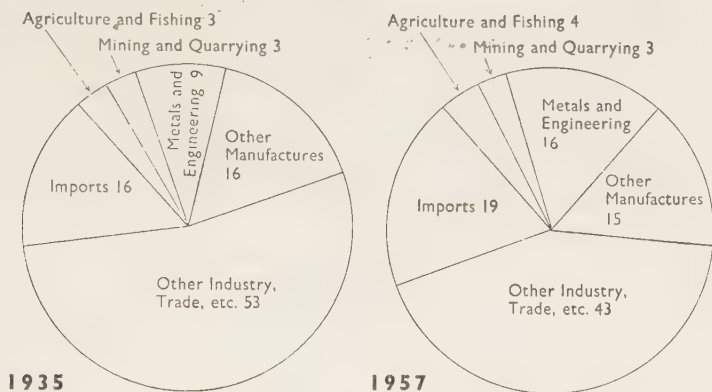


Manufacturing industry contributes nearly 40 per cent to the total output of goods and services, and together with mining and quarrying, building and contracting and public utilities (gas, electricity and water) makes up over half the total; agriculture, forestry and fisheries account for less than 5 per cent, transport and communications, together with the distributive trades, for slightly more than 20 per

cent. The composition of the supply of goods and services in 1935 and 1957, by source, is shown in the diagram below.

SUPPLY OF GOODS AND SERVICES IN 1935 AND 1957

Percentage composition at current factor cost



Output in the economy as a whole has increased by nearly a third since 1948. Industrial production—accounting for about half of total output—has risen by two-fifths over the eleven years. There has been an appreciable improvement in living standards, the proportion of the national resources devoted to investment has been raised progressively to record levels, and a large expansion in exports has been achieved. Defence expenditure has been heavy, and in peak years absorbed over 9 per cent of the gross national product. In real terms, between 1948 and 1958, gross fixed capital formation rose by about 58 per cent, consumption by 23 per cent, and public authorities' current expenditure by 22 per cent. The upper diagram on p. 245 shows production and national income trends from 1900 to 1958.

The total working population has risen relatively slowly; in the eleven years to the middle of 1959 it increased by about $1\frac{1}{2}$ million (or some 6 per cent). The expansion of the national income over the same period has, therefore, been mainly the result of higher productivity. During this period unemployment remained very low, on average less than 2 per cent of the working population being out of work as compared with 14 per cent between the two world wars. When resources were stretched to the utmost, as for example, in 1951 and again in 1955, the number of unfilled vacancies was double that of registered unemployed. In 1958, output and employment fell slightly and, at the end of the year, unemployment exceeded 500,000 for the first time since 1947. Heavy unemployment was confined to a few regions, and special measures were taken to steer development towards these regions. There was a strong recovery of activity in the first half of 1959 and, by the middle of July, unemployment had fallen to 395,000.

Investment

Since the end of the war gross fixed investment has risen markedly, particularly since 1953. In 1938, fixed investment in the United Kingdom was about $12\frac{1}{2}$ per cent of the gross national product; in 1948, 14 per cent; in 1958, over 17 per cent. Up to 1953, investment in oil refineries, chemicals, and iron and steel, and in the housing programmes of local authorities increased particularly rapidly. Since 1954, industrial investment as a whole, and especially in manufacturing, transport and

communications, and distribution, has risen to record levels, while investment in housing has declined. In 1958, the volume of fixed capital formation by manufacturing industry was 69 per cent higher than in 1948, and accounted for more than a quarter of the total.

More than 40 per cent of the total fixed investment is carried out by the central Government, the local authorities and the public corporations, the last accounting for slightly more than two-fifths of public investment, and the central Government for about one-sixth. Increases in public investment were approved in the second half of 1958, and it is estimated that total expenditure under this head in 1959-60 will amount to £1,600 million, compared with £1,418 million in 1957-58. The lower diagram on p. 245 shows the division between public and private fixed investment and the pattern of investment according to type of asset in 1954 and 1958. Table 9 shows the division into industry or type of asset of gross fixed investment in the same years.

TABLE 9
GROSS FIXED INVESTMENT
(At 1954 prices)

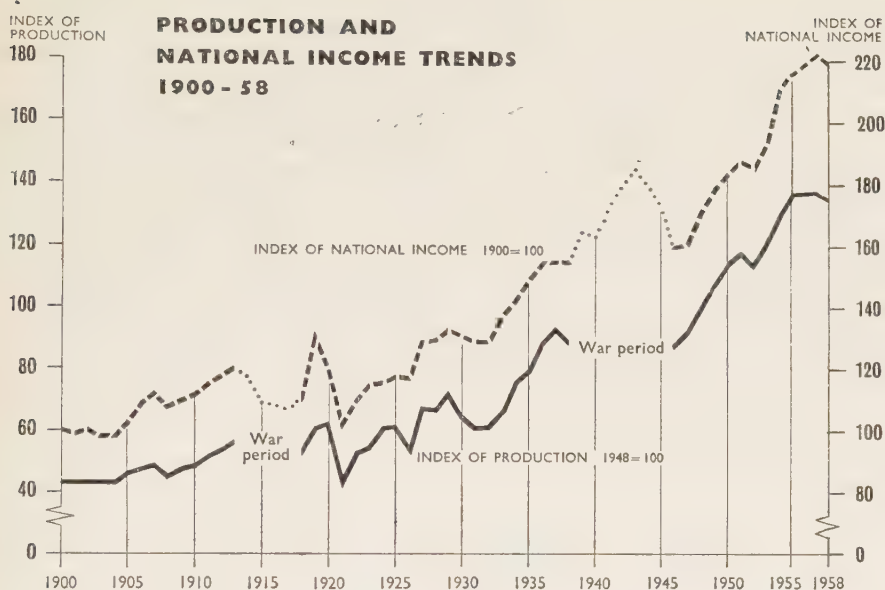
Industry or Type of Asset	£ million		<i>Index Numbers of Volume (1954 = 100)</i>
	1954	1958 (Preliminary)	1958
Dwellings	644	509	79
Manufacturing industry	610	772	127
Gas, electricity and water	303	332	110
Transport and communications ..	274	390	142
Distribution and other services (a)	304	439	144
Other (including roads)	449	531	118
TOTALS	2,584	2,973	115

(a) Includes road goods transport.

Savings and the Financing of Investment

The marked growth of investment since 1954 has been made possible by a substantial expansion of personal savings (see Table 10). During the early post-war years, personal savings were very small, partly because people were making good the war-time arrears of expenditure on necessities such as clothing and household goods; most of the saving, therefore, was carried out by the Government through its Budget surpluses and by companies. But the next few years brought a remarkable growth in private savings, and in 1958 these totalled nearly £1,500 million, more than double the 1954 level and equivalent to just under 40 per cent of total savings. In the period 1948-51, on average only about 2 per cent of disposable personal income was saved, but by 1958 the proportion had risen to about 9 per cent.

The rise in personal savings has taken various forms. A substantial volume has come from life assurance premiums and other forms of contractual savings. The National Savings movement and building societies (the trend towards house purchase by means of mortgages reflecting the growth of private house ownership) have also been significant sources of savings.



PUBLIC AND PRIVATE FIXED INVESTMENT 1954 AND 1958

(£ million at 1954 prices)

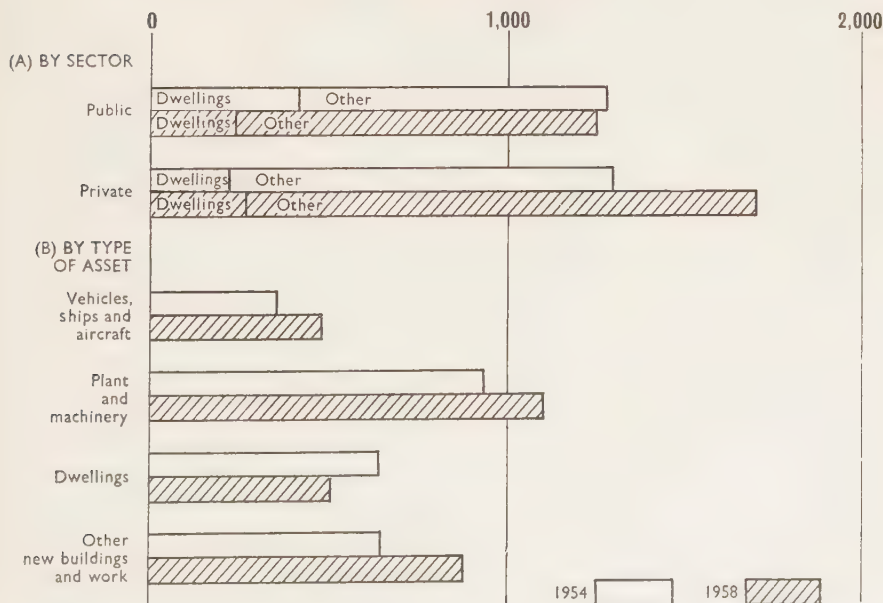


TABLE 10
SAVINGS IN THE UNITED KINGDOM (a)

£ million

	1954-56 (Average)	1957	1958 (Preliminary)
Persons	1,002	1,484	1,471
Companies	1,712	1,876	1,742
Public corporations	190	173	148
Central Government and local authorities	452	688	716
TOTALS	3,356	4,221	4,077

(a) Gross saving, i.e. before providing for depreciation and stock appreciation and for tax, dividend and interest reserves.

Public Authorities

Expenditure by the central Government, local authorities and the National Insurance funds has expanded appreciably in comparison with pre-war years. The main factors in this trend have been the growth of the social services, the housing programmes of the local authorities, and, since 1950, a high level of defence expenditure. The latter, however, has been held at around £1,550 million in recent years; it accounted for 20 per cent of the current expenditure of the public authorities in 1958 as against 27 per cent in 1953. Government expenditure (excluding National Insurance funds) as a percentage of the gross national product has dropped from 32 per cent in 1948 to 27 per cent in 1958.

Table 11 shows how the public authorities collected and spent their revenue, including national insurance and health contributions, in 1958.

TABLE 11
COMBINED REVENUE ACCOUNTS OF PUBLIC AUTHORITIES IN 1958

Revenue	£ million	Per cent	Expenditure	£ million	Per cent
Taxes on income and capital	2,902	38	Defence	1,554	20
Taxes on outlay—alcohol, petrol, purchase tax, etc.	2,386	31	Grants to persons—pen- sions, subsidies, Na- tional Insurance, etc.	1,885	25
National Insurance con- tributions	858	11	Local authorities' current expenditure on goods and services	1,143	15
Rates	646	9	Interest on national and local debt	1,041	14
Rent, dividends, interest, etc.	679	9	Central Government Health services	623	8
Gross trading income ..	152	2	Other expenditure	569	7
			Surplus	808	11
TOTALS	7,623	100	TOTALS	7,623	100

Personal Incomes and Consumer Expenditure

There has been a marked change since 1938 in the distribution of personal income by source. Incomes from employment in 1958 totalled £13,440 million (as compared with £9,105 million in 1952), and accounted for about 71 per cent of total personal incomes as against 60 per cent in 1938; for rent, dividends and interest the corresponding percentages are 22½ and 11½. Nearly two-fifths of all incomes after tax are in the £250 to £499 a year range, and a further one-third in the next range, £500 to £749. Incomes of £2,000 and more a year accounted for less than 4 per cent of aggregate personal income after tax.

Consumer expenditure has risen steadily in real terms, i.e. after discounting the effect of price changes. By 1948, it had reached approximately the same total volume as in 1938. In 1958, consumer expenditure was 23 per cent higher than in 1948; and 9 per cent higher than in 1954 (as shown in Table 12). The principal long-term trend is the marked rise in outlays on motor vehicles and, to a lesser extent, on other durable goods. In 1958, these two groups accounted for nearly 9 per cent of consumer expenditure. The proportion spent on food, where the trend is towards greater consumption of both higher quality and pre-packaged foodstuffs, is fairly constant at slightly under one-third of the total.

TABLE 12
CONSUMER EXPENDITURE IN THE UNITED KINGDOM
(At 1954 Market Prices)

Category	Expenditure		Increase	
	£ million		£ million	Per cent
	1954	1958	1954-58	1954-58
Food	3,778	4,093	315	8
Alcoholic drink	818	891	73	9
Tobacco	855	930	75	9
Housing, fuel and light ..	1,539	1,618	79	5
Clothing and footwear ..	1,174	1,318	144	12
Cars and motor cycles ..	221	334	113	51
Other durable goods	623	705	82	12
Other goods	1,223	1,457	234	19
Other services	1,792	1,750	- 42	- 2
TOTALS	12,023	13,096	1,073	9

Incomes and Prices

Between 1945 and the middle of 1958, the cost of living in the United Kingdom rose almost without interruption, though at varying rates of increase. The most rapid rise in retail prices, roughly 10 per cent, was between 1950 and 1951; the lowest, about 2 per cent, between 1953 and 1954; in mid-1959, however, the retail price index was at the same level as twelve months earlier. Over the period 1948 to 1958, the rise in prices was between 50 and 60 per cent. Wage rates over the same period rose by 87 per cent and average weekly industrial earnings by 85 per cent.

In the six years after the war, the general upward movement of costs and prices was in part the result of the rapid increase in import prices, no less than 50 per cent between 1948 and 1951. This upward trend continued, however, after 1951, although import prices fell. Over the whole period since the war, it is clear that the main immediate cause of the rise in prices has been the tendency of money incomes to rise faster than production.

Steps have been taken by the United Kingdom Government throughout the period to counter this gradual inflation. The main weapons used in recent years have been the prevention of excessive demand by fiscal and monetary measures and appeals for voluntary restraint in increases in wages and profits. Nevertheless, the rapid growth of money incomes continued until 1957 and has contributed, at times, to lack of confidence in, and occasional speculation against, sterling. Wages and salaries rose less in 1958 than in previous years, although the rise was still greater than the increase in the output of goods and services.

Speculation was a factor in the heavy loss of gold and dollar reserves in the third quarter of 1957. Counter measures were taken to stop the upward drift in costs and prices, including a ceiling on public investment, a ceiling on bank advances and a sharp increase in the Bank Rate. Restoration of confidence in sterling and a strong recovery in the gold and dollar reserves followed quickly and price levels remained steady.

It was possible, therefore, for the emphasis in economic policy to be changed to expansion. The Bank Rate was reduced by stages to the lowest level since 1955, restrictions on all types of domestic investment and borrowing were lifted, and greater resources made available for investment overseas. By 1959, the economy was undoubtedly much stronger than in previous years and was able to look forward to a greater measure of price stability while expanding more quickly and maintaining a stronger external position.

Overseas Trade and Payments

The overseas trade of the United Kingdom has undergone a radical transformation since 1945. Exports have expanded rapidly: the pre-war volume was almost regained in 1946; since then it has doubled. At the same time both the commodity composition of exports and their geographical distribution has changed. The engineering and vehicles industries, in which there has been a rapid development of new processes and products, in 1958 provided 44 per cent of total exports as compared with an average of 20 per cent in 1935-38. The dollar area now receives nearly 18 per cent of exports as compared with 11 per cent in 1938.

Between 1954 and 1958, the volume of imports rose by 14 per cent and that of exports by 12 per cent, while the terms of trade (the relation of export prices to import prices), became more favourable, without, however, restoring the 1938 relationship. Invisible earnings from shipping, commerce, the tourist trade, investment income and other sources have also improved greatly, and the net surplus on current account in 1958 exceeded £450 million, which included a surplus of £120 million on visible trade, as against a deficit of £58 million in the preceding year; it was the first surplus on visible trade since the war, and probably for many years before 1939.

The United Kingdom needs a substantial surplus on external current account, sufficient not only to meet all its overseas commitments and obligations (including the repayment of the North American post-war loans), but also to maintain and increase long-term investment overseas, particularly in the Commonwealth. Traditionally, Britain has been a heavy exporter of capital and, since 1945, despite severe burdens on resources strained by war, the outflow has been maintained at a

high level. In the years 1954-58, net long-term overseas investment has averaged more than £200 million a year, or over 1 per cent of the national income.

It is also necessary to improve the external monetary position, that is to say, the ratio of gold and foreign currency reserves to external liabilities. In 1958, rapid progress was made in building up the gold reserves, and by the end of the year (despite resumption of payments on the North American loans) they had reached their highest level since the end of the war, apart from a brief period in 1951 when commodity prices were at their peak as a result of the war in Korea. In the first half of 1959, £71 million worth of dollars was repaid to the International Monetary Fund (IMF) and £58 million in gold was paid in respect of the increase in the United Kingdom's subscription to the IMF in May 1959, but the upward trend of the reserves continued and they rose by £37 million to a total of £1,333 million by the end of June (see also p. 464).

The renewed strength of sterling was underlined by the introduction, at the end of 1958, of convertibility for current account sterling held by non-residents and by an increase in the sterling balances held in London by non-sterling countries.

IX. INDUSTRY

ORGANISATION AND PRODUCTION

The United Kingdom was the first country in the world to become highly industrialised. Eleven people work in mining, manufacturing and building for every one in agriculture. The United Kingdom is one of the world's largest exporters of manufactured goods per head of population and the range of its industrial manufactures reflects its position as one of the most important workshops of the world.

Location

The factors that have influenced the location of industry in Britain are many and various. During the rapid industrialisation of the nineteenth century, one of the most important influences was the proximity of coal, the major source of power, particularly when it was associated with ease of access to other raw materials such as iron ore in the West Midlands and salt (for chemicals) in Cheshire, and to the coast which in turn offered easy access to imported raw materials and a quick outlet for exports. In the course of the past hundred years, the pull exercised by coal has been progressively weakened as improved means of communication and an alternative source of power in electricity have been developed and have enabled advantage to be taken of other sites—e.g., those near to big consumer markets and plentiful supplies of labour. During the inter-war period there was a tendency for the 'new' industries such as those manufacturing motor vehicles, electrical goods and rubber products to develop rapidly in the south (especially in and around Greater London) and in the Midlands. On the other hand, this period was one of acute depression and mass unemployment for the older industrial areas which specialised in the great staple industries—coalmining, steel, shipbuilding, marine engineering and cotton manufacture. These conditions prompted official action (which has been intensified since the second world war) aimed at encouraging new industrial development and diversification in the areas concerned (known as Development Areas, see pp. 253–4) where labour and other resources are to be found, and discouraging further industrialisation in congested areas such as Greater London and Greater Birmingham. A considerable expansion and diversification of industry has, in fact, taken place in the development areas as a result of these policies, allied to the war-time dispersal of industry and the widespread demand for new factory premises over the past decade.

The main areas of industrial concentration are still, with one exception (London), the areas which saw the beginning of Britain's industrial greatness and which, with two exceptions (London and Belfast), are on or near coalfields, but, particularly since the first world war, many smaller and more widely dispersed centres of industry have grown up, notably in southern England. A brief description of the location of British industry, grouped according to broad geographical areas, is given below.

Greater London. London is the main centre in Britain of the clothing and food and drink industries, of printing, of film production, and of the manufacture of furniture, materials for the arts, precision instruments and many other specialised goods. Small firms predominate in all these industries, and the average size of

manufacturing firms in London is well below the national average. London is also an important centre for light engineering and chemicals, and has some heavy engineering plants. Indeed, London is so large and its industries so diverse that it is a main centre for many of the broad groups of manufacturing industries, with the notable exception of textiles and metal manufacture.

South-east England. A substantial proportion of Britain's output of motor vehicles comes from Dagenham (Essex), Luton and Dunstable (Bedfordshire). Among the more important of the various industries in the area are oil-refining, light engineering, printing, brewing, electronics, aircraft construction, food processing and furniture.

West and south-west England. The largest city, Bristol, is both a leading port and industrial centre with aircraft, tobacco, food processing and other industries. Gloucester has also aircraft and engineering plants. Swindon, in Wiltshire, has railway and engineering works. The port of Southampton is served by the largest passenger liners and has ship repair yards, oil refineries and other industries. Plymouth has an important naval dockyard and several light industries. The west of England is also noted for its wool cloths.

East Anglia and Lincolnshire. Besides being one of the most productive agricultural regions, the eastern counties possess some sizeable towns. Ipswich and Grantham are renowned for agricultural machinery and implements, and Norwich for footwear and food manufacture. Food canning and freezing, based mainly on locally grown produce, have developed rapidly. Scunthorpe, in Lincolnshire, is an important steel-making centre, and the ports of Grimsby and Yarmouth have extensive fish processing plants.

Midlands. The main industrial area of the Midlands consists of the great conurbation centred on Birmingham and Wolverhampton (which includes portions of Staffordshire, Worcestershire and Warwickshire) where there is a wide variety of industry, including notably the manufacture of metals, electrical and engineering products, and also jewellery, rubber products and domestic metalware. The smaller conurbation of North Staffordshire, centred on Stoke-on-Trent, is devoted chiefly to the manufacture of pottery and china and to coalmining. The largest concentration of motor vehicle manufacture in the United Kingdom is situated in the Midlands at Coventry and Birmingham and, further to the south, near Oxford.

Industrial cities and towns lying outside the main industrial area include Leicester (hosiery, clothing, footwear and footwear machinery), Derby (general engineering, locomotives, aero engines), Nottingham (light engineering, lace, drugs, tobacco), Rugby (electrical engineering), Northampton (footwear, engineering) and Kidderminster (carpets). Corby, in Northamptonshire, has an expanding steel industry based on local deposits of iron ore, and at Peterborough there are several large engineering works. The richest coalfield in Britain lies in the north-west of the area and continues into Yorkshire.

Lancashire. Besides being the commercial hub of the cotton textile industry, Manchester is one of the chief centres of electrical and heavy engineering, machine tools and dyestuffs in Britain. Most of the cotton yarn is spun in Bolton, Oldham, and Rochdale, and at Stockport (in Cheshire); further to the north lie the weaving towns of Burnley, Nelson, Blackburn, Colne, Accrington and Darwen; Preston and Bury have both spinning and weaving plants. Engineering industries, notably the manufacture of printing, textile and electrical machinery and commercial vehicles, are, however, as important to the area today as cotton. The Lancashire coalfield also lies in the Manchester-Wigan area.

The Manchester Ship Canal, which carries a substantial volume of overseas trade, links Manchester with Merseyside. It passes through important industrial towns such as Warrington with its metal industries, Widnes with its chemicals, and Ellesmere Port with its oil refinery installations, before reaching the Mersey estuary. St. Helens, to the north of the canal, is famous for glass manufacture. Liverpool is the second port of Britain and a great commercial centre and, after London, the greatest centre for food processing, especially flour milling and sugar refining. Among its older industries is ship repairing; shipbuilding is a major industry across the river at Birkenhead. Many new industries, including electrical engineering and the manufacture of other heavy industrial equipment have been established in the Liverpool area, particularly on industrial estates (see p. 253). Barrow, in the north-west of the county is a well-known shipbuilding area.

Yorkshire. Most of the county's industry is located in the West Riding, where about 90 per cent of the United Kingdom's worsted industry and the greater proportion of its woollen industry are found. Bradford is the main city for worsteds and also the commercial centre of the whole wool trade; Morley and Leeds specialise in cheaper cloths, and Batley, Dewsbury and Cleckheaton in heavy cloth. Huddersfield has a reputation for fine woollens and Halifax for carpets. Leeds, the commercial capital of the area, has a large ready-made clothing industry and manufactures a range of engineering products. Further south is the heavy engineering centre of Sheffield, famous for its high quality steels, cutlery and tools. The area's extensive coalfields provide about one-fifth of Britain's coal. York, noted for chocolates and confectionery manufacture and with important railway shops, and Hull, one of the world's largest fishing ports and with many manufacturing industries, including engineering, vegetable oil processing, paints and sawmilling, are other important industrial towns in Yorkshire.

North-east England. The coal industry is of great importance in Northumberland and Durham. Tyneside and Wearside together are second only to Clydeside for shipbuilding and ship repairing, and ships are also built at the Hartlepoons and on Tees-side. Iron and steel plants are situated at Consett, in county Durham, and in the Middlesbrough area, which also has some of the largest chemical plants in Britain. Tyneside is particularly noted for the manufacture of heavy electrical equipment. Other industries of the area, whose manufacturing structure has been greatly diversified since 1937, are mining and other machinery, machine tools, ropes, glass and scientific instruments.

Wales. Although coalmining, including the extraction of special coals such as steam coal and anthracite, remains the chief industry of South Wales, the area today produces many categories of capital and consumer goods. Its steel industry, with some of the most modern plants in Europe, supplies almost all Britain's output of tinplate and a large proportion of steel sheet and similar products. New manufacturing industries, most of which have been established in the past twenty-five years and are located on industrial estates (see p. 253), include plastics, synthetic fibres, clothing, electronics and light engineering. The largest cities are Cardiff and Swansea. Slate quarrying is an important source of employment in North Wales, but the seaside resorts and other towns, particularly Wrexham, have light industries.

Scotland. The thickly populated, industrial area of Clydeside, whose capital is Glasgow, is Britain's largest shipbuilding and marine engineering centre. The steel industry, specialising in plate and heavier products, is mainly in the Motherwell area. A variety of engineering products, such as earth-moving

equipment, locomotives, air-conditioning plant, industrial valves, food-processing machinery and commercial vehicles, are manufactured on Clydeside. The Scottish coalfields of the Lothians, Fife, Ayr, and Lanark produce about one-tenth of Britain's coal, but the seams in the last named field are gradually becoming exhausted.

Edinburgh, the capital of Scotland and its second largest city, has printing, brewing and engineering industries. The United Kingdom jute industry is concentrated in Dundee, which also provides many other products, such as office machinery, clocks and watches, refrigerators, and food manufactures. Aberdeen, the third city of Scotland and a famous fishing port, has several light industries. Kirkcaldy, in Fife, is the centre for the manufacture of linoleum. The border towns in the south are especially renowned for high quality woollens. The north of Scotland possesses Britain's only significant resources of hydro-electric power.

Northern Ireland. One of the largest shipyards in the United Kingdom is located at Belfast, where there is also a large aircraft construction establishment. In addition to marine engineering, Northern Ireland has a range of other engineering activities, and traditional industries of the area include linen, shirt-making, ropes, and tobacco.

Distribution of Industry Policy

Government policy is particularly concerned with the distribution of industry. The Government cannot direct a firm to go to any particular area or site, but the Board of Trade has statutory powers under the Town and Country Planning Acts, 1947, to ensure that new industrial development throughout Great Britain is carried out consistently with the proper distribution of industry. A certificate to this effect from the Board of Trade is necessary before consent may be given by a local planning authority for the erection of a new industrial building or extension with an area exceeding 5,000 square feet. One use of these powers has been to discourage the expansion of industry in congested areas such as Greater London or Birmingham.

Moreover, areas in Great Britain where there is likely to be a special danger of unemployment have been scheduled by the Board of Trade as Development Areas under the Distribution of Industry Act, 1945. The purpose of this Act, and of the Distribution of Industry Act, 1950, is to promote the growth of new industry and the expansion of existing industry in the development areas. The main advantages which these Acts give to development areas are that the Board of Trade may build factories for letting to suitable industries and the Treasury may help by making loans or grants to undertakings which are unable to secure finance through normal channels. The Board of Trade factories are built and managed by Industrial Estate Companies. The directors of these companies are unpaid and are appointed by the Board of Trade, and their capital is provided from Government sources. The companies include North-Western Industrial Estates Ltd., North-Eastern Trading Estates Ltd., Scottish Industrial Estates Ltd., Wales and Monmouthshire Industrial Estates Ltd., and the West Cumberland Industrial Development Company Ltd.

There are development areas in the following parts of England and Wales: the mining and coastal areas of Northumberland and Durham; West Cumberland; South Wales and Monmouthshire; Wrexham; South Lancashire; Merseyside; and North-East Lancashire. In Scotland, the industrial area in and around the Clyde Valley, the Dundee area, and part of the Highlands have been scheduled as the Scottish Development Area.

New industrial buildings and extensions to existing buildings, both of over 5,000 square feet, completed in Great Britain between the beginning of 1945 and the end of 1958 totalled over 400 million square feet. Of this total, about 27 per cent was in the development areas, which have, by contrast, almost 18 per cent of the country's insured workers in manufacturing industry.

Government assistance has not been limited to development areas; the Board of Trade has given attention to the needs of other areas of persistent unemployment and has tried to steer suitable new industry to them. In some of these places and in new towns or expanded towns, intended to receive population and industry moving from congested centres, factories have been built by local authorities. In rural and fishing areas, which need the addition of some manufacturing industry, the Development Commission has financed the building of several factories for industrial firms prepared to go there. While the employment situation in the development areas as a whole has improved, relatively high unemployment has persisted in certain places both in the development areas and outside them, particularly in Scotland, West and North Wales and certain coastal areas of England. This localised unemployment, some of it in non-industrial areas, became more serious during 1958 and the Government acquired new powers, under the Distribution of Industry (Industrial Finance) Act, 1958, to enable financial assistance to be given, on the recommendation of the Development Areas Treasury Advisory Committee, to undertakings which will provide employment in places where unemployment is relatively high and persistent (see also p. 397).

The Distribution of Industry Acts do not apply to Northern Ireland because, under the Northern Ireland constitution, the matters they deal with are the concern of the Northern Ireland Parliament, which has passed its own legislation to encourage industrial expansion and diversification. The Northern Ireland Government builds factories for renting or purchasing on favourable terms and provides grants and loans for new industrial undertakings, and the Board of Trade gives Northern Ireland priority as if it were a development area for the purposes of encouraging and guiding new or expanding industrial development. As a result, since 1945, 137 firms have started production for the first time in Northern Ireland and 92 schemes of expansion have been put into effect. These new firms and expansion schemes are already providing employment for 36,000 people. The United Kingdom Government also gives manufacturers in Northern Ireland, as in development areas in Great Britain, some preference in placing Government contracts.

Development Councils

In Scotland, the *Scottish Council (Development and Industry)*, with a wide membership including local authorities, trade associations, trade unions, chambers of commerce, co-operative societies and banks, is concerned with the economic development of Scotland. It assists the expansion of existing industry, fosters the growth of new industries especially in areas requiring development, encourages exports, organises exhibitions and publicises Scottish trade and industry (see also p. 233).

In Wales, a body corresponding to the Scottish Council in aims and constitution is the *National Industrial Development Council of Wales and Monmouthshire*.

The *Northern Ireland Development Council* was established in 1955 to promote the creation of new industries and to reduce unemployment. The council makes more widely known in Great Britain, the United States and elsewhere, the facilities offered by Northern Ireland to new undertakings. It also advises the Northern Ireland Government on matters connected with industrial development.

The Structure of Industry

The pattern of ownership and organisation in industry is varied. Personal, corporate, co-operative and public enterprise all assume a number of different forms,

and all are important in the economy. Industrial enterprises vary from the many small workshops to vast organisations such as the National Coal Board, a public corporation with over 675,000 employees; Imperial Chemical Industries Ltd., a limited liability company which, with its subsidiaries, employs over 115,000 persons in the United Kingdom; and the Co-operative Wholesale Society Ltd., a co-operative society with some 50,000 employees.

Role of Public Enterprise

Throughout the first half of the twentieth century, the growth of the social services, especially health, education and housing, led to the progressively greater influence of the public sector of the economy. There was also an increase in the State's direct participation in productive economic activities, particularly in the decade 1940-50. Since 1951, however, most of the steel industry and the road haulage services of the British Transport Commission have been returned from public to private ownership. State participation is effected mainly through special statutory bodies set up to deal with a particular activity. Such bodies, though not part of a Government department, are under a considerable but varying degree of public control (see pp. 260-1). The most important of these statutory bodies are the public corporations which operate major industries and services in the public interest.

The public corporation in its twentieth-century form is, generally speaking, a public body having a clearly defined and specific task. Its board of directors and its staff are chosen for their experience and competence in a particular field; they are not civil servants, and although they are accountable to Parliament for their actions in a variety of ways, it is they and not the ministers of the sponsoring departments who are responsible for the management of the corporations. Certain of the corporations are self-supporting; others receive Exchequer grants to help them in carrying out the duties with which they have been charged.

Before the second world war, a number of public corporations were established¹ in those industries and services where it was considered that the national interest required co-ordination or control by a public authority. Their constitutions had no standard pattern and their governing bodies differed in the method of appointment and in composition.

Immediately after the second world war, the nationalisation Acts set up public corporations to run certain major industries and services, including coalmining, inland transport, gas supply, electricity generation and supply, and civil air transport. These post-war corporations are less varied in the structure of their governing bodies, which are appointed by the responsible minister, who has full powers of dismissal.

¹ The principal corporations appointed before the second world war were: (1) the Central Electricity Board, established by the Electricity Supply Act, 1926, to rationalise electricity generation and build and operate a main transmission system; (2) the British Broadcasting Corporation, established in 1927 by Royal Charter to provide a national broadcasting service; (3) the Electricity Board for Northern Ireland, established by the Electricity (Supply) Act (Northern Ireland), 1931, to develop electricity supplies in Northern Ireland outside the two county boroughs, Belfast and Londonderry; (4) the London Passenger Transport Board, established by Act of Parliament in 1933, to operate the public transport system of the London metropolitan area; (5) the Northern Ireland Road Transport Board, established by the Road and Rail Transport Act (Northern Ireland), 1935, to acquire public road transport services in Northern Ireland outside the county boroughs; (6) the British Overseas Airways Corporation, established by the British Overseas Airways Act, 1939, to take over the operation of the two main existing air transport companies—Imperial Airways and British Airways.

The following corporations, the organisation and functions of which are described in later chapters, are now operating or controlling industries or services:

- The Bank of England.
- The British Broadcasting Corporation.
- Cable & Wireless Limited.
- The British Transport Commission.
- The Ulster Transport Authority.
- The British Overseas Airways Corporation.
- British European Airways.
- The National Coal Board.
- The Gas Council and Area Gas Boards.
- The Electricity Council and the Central Electricity Generating Board.
- The Electricity Board for Northern Ireland.
- The North of Scotland Hydro-Electric Board.
- The South of Scotland Electricity Board.
- The United Kingdom Atomic Energy Authority.
- The Independent Television Authority.

Mining and Quarrying

Much the most important of the British extractive industries is coalmining. The coalmining industry of Great Britain is operated as a single co-ordinated enterprise under the direction of the National Coal Board. For an account of the coal industry see pp. 300-305.

All other mining and quarrying (e.g., iron ore, sand, gravel, chalk, limestone, salt, tin, slate, oil shale and china clay) is undertaken by private enterprise, usually owned and operated by limited liability companies. About 150,000 workers are employed in mining and quarrying, excluding coalmining.

Manufacturing

Most manufacturing is in the hands of private enterprise. Some exceptions are locomotives and rolling-stock for use on British Railways, built in workshops owned and operated by the British Transport Commission, a considerable quantity of arms and military equipment made in Royal Ordnance factories and other factories operated by the Ministry of Supply, and some fighting ships built in naval dockyards operated by the Admiralty. Printing and bookbinding is undertaken by staffs of the Stationery Office, while the repair, and to a limited extent the construction, of post office equipment is carried on in factories run by the Post Office.

Surveys of the size of all manufacturing establishments employing more than 10 persons are made periodically by the Ministry of Labour and National Service; the results of the most recent of these surveys, based on returns rendered by employers in December 1955, show that about a third of all employees in manufacturing industries are in establishments employing from 100 to 500 persons. A high proportion of the biggest establishments are in the heavy industries, while the average size of establishments in industries making consumer goods is smaller than in manufacturing industries as a whole. Comparisons with results obtained in earlier surveys on similar lines suggest that there is a slow but significant trend towards an increase in the average size of manufacturing establishments: in 1955, establishments with 1,000 or more employees were found to employ 2,640,000 persons, over ten per cent more than two years previously and more than twice as many as in 1935.

The size of establishments is not in itself an indication of the size of manufacturing firms, as a single firm may own several establishments. There are no general surveys of the size of manufacturing firms comparable with the survey of establishments. It is known, however, that in a few industries a small number of big companies are responsible for most of the total production. Examples are oil-refining, steel making, the manufacture of motor vehicles and components, heavy electrical equipment, bicycles, cement, basic chemicals and aero engines. Shares in these companies are usually distributed among a great number of holders and it is rare for a few large holders to have a controlling interest.

The way in which the work of production is divided within and between different firms varies from industry to industry. In the cotton industry, for example, it is usual for different firms to undertake the various main processes of production (spinning, weaving, finishing), while in the woollen section of the wool textile industry all these processes are commonly undertaken within the same firm. Some of the leading establishments in the vehicles group of industries are primarily engaged on the assembly of parts, many of which have been built for them under contract by specialist firms.

An account of some of the principal manufacturing industries is given on pp. 324-353.

Building and Civil Engineering

In building and civil engineering, large-scale work is usually carried out by private contractors. Since the end of the second world war, most new houses have been built by firms under contract to local authorities, but an increasing number are now built under contract to persons or companies, or for sale.

Building firms may be divided into those undertaking general building and civil engineering work and those concerned with highly specialised work, many of which operate outside as well as inside the building industry. Building is an industry of small firms; more than half of the firms employ fewer than twenty employees. For a fuller account of the building and civil engineering industries see pp. 321-4.

Industrial Association

From the middle of the nineteenth century, private industrial undertakings have increasingly entered into voluntary association for a number of different purposes. Some of the more important of these purposes may be classified as follows:

1. The provision of common services, the exchange of information, liaison with the Government, and representation of their members' point of view.
2. The regulation of trading practices.
3. Negotiation with trade unions on wages and conditions of work.

Associations for the first and third of these purposes cover, with varying completeness, most of British industry but there are wide sectors of industry where there is no collective agreement to regulate trading practices. Associations which deal with labour matters usually consist of firms engaged in the same type of operation or manufacturing process. Organisations mainly concerned with representations to the Government, provision of common services or the regulation of prices are built up round a product or an allied group of products. In an industrial sector concerned wholly with an allied group of products, a single association may undertake all the required functions.

There are about 270 national federations and probably about 1,600 other employers' organisations (mostly regional or local, and members or branches of the national federations) all concerned with negotiation of wages and conditions of

work. Most of the national federations are in turn affiliated to the *British Employers' Confederation*, the national body representing employers on labour questions affecting industry generally (see p. 405).

The number of manufacturers' associations concerned with providing common services and regulating prices and trading methods is not known precisely, but according to a survey carried out by Political and Economic Planning between 1953 and 1956, some 1,300 are in existence, varying greatly in importance, structure and activities. Membership of the *Federation of British Industries* (FBI), the national body recognised as the spokesman for British industry on economic, commercial and production (as distinct from labour) matters, consists of some 7,500 individual firms and nearly 300 national trade organisations, with a total affiliated membership of some 40,000 to 45,000 firms. The FBI has offices in the main industrial centres in the United Kingdom and is widely represented abroad. It has a wholly owned subsidiary company, British Overseas Fairs Limited, which is responsible for organising British trade fairs overseas.

A number of the organisations affiliated to the FBI also deal with labour matters and are affiliated to the British Employers' Confederation. The two organisations work closely together on matters of common interest.

Other important national associations of employers are the *National Union of Manufacturers* (NUM) and the *Association of British Chambers of Commerce*. The members of NUM are over 5,000 manufacturing firms, mainly small or medium sized, and some 66 trade associations are affiliated to it. Like the FBI it has regional branches. The Association of British Chambers of Commerce is the central organisation to which 98 local chambers of commerce (together with 15 British Chambers of Commerce operating in foreign countries) are affiliated. In Scotland, there is also a central organisation, the Council of Scottish Chambers of Commerce. These bodies are open to all kinds of producers and traders and exist for promoting the interests of local industry and commerce. The FBI, the NUM and the chambers of commerce often act jointly in matters of common concern.

Relations with Government

The Government is able to influence industry in a number of ways—through fiscal and monetary policy, by means of physical controls and inducements, as well as by providing information and advice.

A system has grown up whereby a particular Government department acts as the main point of contact, or 'production department', for each major industry.

The department through which the Government's relations with trade and industry are chiefly conducted is the Board of Trade, and its responsibilities cover a wide range of industries and materials. Certain industries and services, however, are the responsibility of other departments, as production departments:

Ministry of Supply	Aircraft, radio and light metal industries and explosives. (The primary task of the ministry is to supply the armed forces.)
Admiralty	Shipbuilding and ship repairing.
Ministry of Agriculture, Fisheries and Food	Farming, horticulture, agricultural machinery, fisheries, and food processing.
Ministry of Power	Coal, oil, gas, electricity (including nuclear power), iron and steel.

Ministry of Transport and Civil Aviation	Transport services (including civil aviation), roadmaking, and certain sections of the quarrying industry.
Ministry of Works	Building, civil engineering and building materials.
Ministry of Housing and Local Government	Housebuilding.
Ministry of Health	Medical and surgical goods.

The Treasury is responsible for economic policy, and specifically for fiscal and monetary policy through which it is able to influence the level of economic activity and the utilisation of the nation's resources. The Ministry of Labour and National Service is the channel through which manpower policy is conducted.

There are separate departments of the Northern Ireland Government for matters within the competence of the Northern Ireland Parliament. The Ministry of Commerce deals with industry, including the encouragement of industrial development.

During and after the second world war, many operations of industry and commerce were subject to Government control. Very few of these now remain; of those in force probably the most important is the power of the Board of Trade to influence the location of industry. The Ministry of Housing and Local Government, acting through local planning authorities, has powers to control the use of land, as described on pp. 186-9. The export and import of certain products still require Board of Trade approval.

The Central Statistical Office, which is attached to the Cabinet Office, was established in 1940 to provide a comprehensive statistical service to assist the authorities in framing economic and financial policy.

Although departments themselves compile statistics relating to their particular responsibilities, and may publish them in their own standard publications, the comprehensive statistical publications are prepared by the Central Statistical Office, which collects the main departmental statistics and compiles its own series from departmental and other information. Its regular publications are: the *Monthly Digest of Statistics*, *Economic Trends* (monthly), the *Annual Abstract of Statistics*, the *Preliminary Estimates of National Income and Expenditure* (published annually before the Budget) and the fuller *National Income and Expenditure* Blue Book issued later in the year. The *Digest of Scottish Statistics* is published half-yearly by the Scottish Statistical Office, a *Digest of Northern Ireland Statistics* at half-yearly or yearly intervals by the Ministry of Finance of the Northern Ireland Government, and an annual *Digest of Welsh Statistics* by the Ministry of Housing and Local Government. In recent years, statistical information about the United Kingdom has been made fuller and more quickly available in accordance with a plan announced by the Chancellor of the Exchequer in August 1956. Estimates of national income and expenditure are now published quarterly as well as annually; balance of payments statistics have been improved, especially in regard to capital transactions; up-to-date information on the trends of profits and of personal income and expenditure is being obtained by means of sample surveys; additional information on recent and possible future trends in investment is being obtained, both by sample surveys and returns from building and civil engineering firms about new contracts; and quarterly estimates of the value of stocks in manufacturing industry and in the wholesale trade have been introduced.

To ensure that industry is fully aware of Government policy and also that policy is framed with a full knowledge of industry's needs and difficulties, a number of

consultative bodies were set up representing Government, employers' associations and trade unions. Among the most important of these are the *National Production Advisory Council on Industry* (NPACI) and the *National Joint Advisory Council* (NJAC). The NPACI, which covers the wider problems of industrial production, is under the chairmanship of the Chancellor of the Exchequer and includes representatives of the Regional Boards for Industry (see below) and of certain Government departments as well as of employers and workers. Northern Ireland sends two representatives to meetings of the NPACI as observers. The NJAC consists of representatives of private employers, the nationalised industries and trade unions, under the chairmanship of the Minister of Labour and National Service, and is concerned with matters affecting the relations between employers and workers.

An important body, which is purely advisory to the Government rather than a channel of communication with industry, is the *Economic Planning Board*. It was established in 1947 to advise on economic policy; its proceedings are confidential. The chairman of the board is one of the two Permanent Secretaries to the Treasury, and its membership includes representatives of the Treasury, the Board of Trade, the Ministry of Power and the Ministry of Labour and National Service, and nominees of the Trades Union Congress, the Federation of British Industries and the British Employers' Confederation.

These consultative bodies approach the study of problems from a broad national point of view. There are, in addition, consultative bodies concerned with the special problems of Scotland and Wales and of the English regions. The most important of these are the nine *Regional Boards for Industry* and the corresponding *Scottish and Welsh Boards for Industry*, whose main functions are to keep the Government informed on industrial conditions in the English regions and in Wales and Scotland, and to provide a link between central Government and local industry. The regional boards have set up district advisory committees wherever they considered that the geographical grouping of industry justified such a step.

Government and the Nationalised Industries

The extent to which the responsible minister has power over the working of the boards which have been set up to run the nationalised industries varies from industry to industry, but two features are common to almost all of them. First, the minister appoints the chairman and members of each board, and secondly, he has power to give general directions as to how the industry should be run, but does not interfere in day-to-day management. It is usually also laid down that the board shall give to the minister any information, statistics and financial accounts which he may require. In practice, as the responsible minister is kept fully informed and major policy decisions are reached in consultation with him, there is very seldom occasion for him to issue a formal directive.

The minister also has financial powers and responsibilities. The usual financial arrangement is that the board is required to conduct its business so that receipts at least balance outgoings over a period of years. The responsible minister is usually empowered (subject to Treasury approval) to say what shall be done with any surplus should the boards make a profit. As regards finance of capital expenditure, the present system is that such finance is provided, in the form of interest-earning loans, by the minister from the Exchequer; bank advances being used only for normal requirements of short-term capital after outstanding loans have been repaid.

The minister responsible for each nationalised industry must take steps to see that the interests of the industry's customers are protected. This is usually done

by the establishment of representative consumers' councils to consider complaints and suggestions made to them, and to advise the board or the minister on the changes they think desirable. It is recognised that these arrangements are still to a great extent experimental.

Government policy towards these industries is subject to the approval of Parliament. Opportunities for parliamentary discussion are afforded by debates, including debates on their annual reports and accounts, and by answers to parliamentary questions, which, in principle, are admissible only if concerned with policy rather than details of administration.

In order to ensure that parliamentary discussion of the nationalised industries is informed and effective, a House of Commons Select Committee on the Nationalised Industries was established in March 1957. The terms of reference of the committee are to examine the reports and accounts of the nationalised industries established by statute, whose controlling boards are appointed by Ministers of the Crown and whose annual receipts are not wholly or mainly derived from money provided by Parliament or advanced by the Exchequer. The first report of the select committee, published in October 1957, dealt with the two Scottish electricity boards and also discussed ministerial control of the nationalised industries. The second report, published in May 1958, related to the coalmining industry, and in July 1959 the committee's report on the airways corporations was issued. These reports are debated in the House of Commons.

In most other respects these industries under public ownership have the same relations with the Government departments responsible for them as do the private industries.

Production and Productivity

Industrial production (mining and quarrying, manufacturing, building and contracting, and gas, electricity and water) which, in 1957, was more than 50 per cent greater than before the war, increased rapidly in the immediate post-war years as industry was turned over from war production and manpower was released from the armed forces. It had regained the pre-war level by 1946 and was 15 per cent greater by 1948. The course of production and employment from 1948 to 1957 is shown in Table 13.

TABLE 13
PRODUCTION AND EMPLOYMENT IN INDUSTRY, 1948-57
(1948 = 100)

	Industrial Production	Employment in Industry
1948	100	100
1949	106	102
1950	114	103
1951	117	106
1952	114	105
1953	121	106
1954	130	108
1955	137	111
1956	136	112
1957	138	112

Source: *Economic Survey*, 1958.

From 1948 to 1957, industrial production rose by 38 per cent. The numbers employed in industry rose by only 12 per cent, giving an increase in output per man of 24 per cent. This rise in productivity was the result of greater efficiency through the introduction of improved methods and processes. Production showed only a small change in 1955-58, mainly because of measures taken to check inflationary tendencies. Figures for 1958 are not available on quite the same basis as those from 1948 to 1957 given in Table 13. Compared with 1957, however, there were slight falls in 1958 in industrial production and employment which together indicated a slight increase in output per man-year.

Since the war, the greatest increases in production have been in the engineering, shipbuilding and electrical goods group, the vehicles group, the chemicals group, the paper and printing group, and the gas, electricity and water group, with increases between 1948 and 1957 of approximately 55 per cent, 65 per cent, 92 per cent, 69 per cent and 63 per cent respectively. Consumption of electric power by factories and other industrial establishments doubled between 1948 and 1958.

The promotion of productivity is regarded as primarily a matter for industry itself. Employers' associations and trade unions are engaged in activities to raise industrial productivity. The former often provide technical assistance and conduct market surveys. The National Union of Manufacturers (NUM) has established an advisory service to enable small firms to obtain advice on production problems. The trade unions in many industries organise special schemes for training young people, and also a variety of courses designed to give trade unionists an understanding of modern management techniques. Private consultants specialising in management and work study are available to give advice to firms on measures to increase their productive efficiency; there are also many specialist institutions, both public and private, concerned with various aspects of productivity.

The British Productivity Council (BPC) has been established by both sides of industry to stimulate interest in methods of raising productivity. The BPC was set up in November 1952 to continue and develop the work of the Anglo-American Productivity Council which, between 1948 and 1952, sent productivity teams, made up of representatives of management, technicians and operatives, from many British industries to study progress and techniques in the United States. It is an independent body on which are represented the British Employers Confederation, the Federation of British Industries, the Trades Union Congress, the Association of British Chambers of Commerce, the National Union of Manufacturers and the nationalised industries; its work is financed by contributions from these bodies and by a Government grant-in-aid. Advisory committees have been set up to promote productivity in the building trades, in agriculture and in retailing. Much of the BPC's work is done through over 100 local productivity committees and associations throughout the country. These local organisations arrange meetings, inter-factory visits, courses, conferences, film shows and exhibitions. To assist them, and the many other national and industrial bodies with which it co-operates, the BPC produces booklets, pamphlets, case studies, films and a monthly bulletin, and arranges work study demonstrations.

The British Standards Institution (BSI), is a voluntary non-profit-making body incorporated by Royal Charter. It prepares and promulgates standards in respect of, *inter alia*, quality, performance, dimensions, testing methods and codes of practice. Voluntary acceptance of such standards by manufacturers, buyers and sellers reduces unnecessary variety and simplifies the specification of requirements, thus promoting industrial efficiency. The BSI is governed by a council consisting of representatives of the main organisations of employers and workers, professional institutions and the larger Government departments.

The Board of Trade is the department responsible for general aspects of the promotion of productivity and it administers the Government grants to the BPC, the BSI, and the Council of Industrial Design (see p. 225).

A number of other departments have responsibilities which bear on productivity. The Ministry of Labour and National Service has a Personnel Management Advisory Service, which advises industrial concerns on questions of personnel management. The Department of Scientific and Industrial Research, whose chief purpose is to promote the researches which are the main basis of the long-term growth of efficiency, is also concerned directly with research into such factors as productivity measurement techniques, production engineering and operator fatigue which immediately affect productivity; it also provides technical advisory services. The Ministry of Education is responsible for the technical colleges, at which courses are available in such subjects as work study and industrial engineering. The Ministry of Works provides a Technical Information Service for the building industry; and the Ministry of Power and the British Productivity Council sponsor the National Industrial Fuel Efficiency Service. The Ministry of Agriculture, Fisheries and Food provides a number of advisory services which aim to encourage the efficiency of the British farming industry; these include the National Agricultural Advisory Service, the Agricultural Land Service and the Veterinary Service.

Management

A factor contributing to the growth of productivity in British industry has been the development of new methods of management. During the present century, and particularly during and since the second world war, there has emerged in the United Kingdom, as elsewhere, a growing awareness of the importance of management as a subject requiring special skills and knowledge. This has been stimulated by the increasing pace of technical, organisational and social change, and by the need to compete successfully in world markets in the face of rising production costs. In addition, increased attention is being paid to human relations in industry, and to the importance of communication between management and labour.

Many organisations are contributing to the growing knowledge and appreciation of the wider functions of management. They include institutes and societies concerned with specialist subjects of interest to managers, such as industrial psychology and industrial welfare; associations of those who work in particular fields of management, such as sales managers; and professional bodies whose members may be managers or those who work closely with them, such as accountants or engineers. The professional engineering institutions, for example, include industrial administration in the syllabus of their qualifying examinations.

The British Institute of Management (BIM) was founded in 1947, with Government support, to study and promote improved standards of management throughout industry, commerce, and public administration. It is now almost entirely financed from industrial and professional subscriptions. The main objects of the BIM, which combined in 1957 with the Institute of Industrial Administration, are to provide information on, and undertake research into, management practices and techniques, and to encourage the development of education and training for management on a national scale.

Facilities for management training at all levels have been much extended. Education for management is developing mainly in four ways:

- (1) a national scheme, for the syllabus of which the BIM and the Ministry of Education are jointly responsible, operated through technical and commercial colleges, under which intermediate certificates and final diplomas are granted on the basis of examinations;

- (2) independent courses organised by universities, other educational establishments, professional organisations, industrial consultants, and certain centres specialising in management training (e.g., the Administrative Staff College at Henley-on-Thames, and Ashridge College in Hertfordshire);
- (3) training courses organised by employers' associations, trade unions and various voluntary bodies; and
- (4) formal courses and informal training within individual firms, some of which operate their own residential centres.

There are probably between 400,000 and 500,000 persons who hold managerial posts in industry and commerce in the United Kingdom, and only a minority of them are as yet members of any management body or have received systematic training in the principles of management.

Monopolies and Restrictive Practices

Competition may be limited either by agreements (formal or informal) between suppliers, or by monopolies which dominate the market; legislation in force in the United Kingdom for dealing with these problems is described below.

The Restrictive Trade Practices Act, 1956, provides for the examination and control of restrictive agreements. It requires the entry on a public register of the particulars of a wide range of restrictive agreements (including those relating to common prices, approved lists of dealers and the limitation of production) which affect the supply or processing of goods for the United Kingdom market. The Registrar of Restrictive Trading Agreements is responsible for keeping the register and for bringing the agreements before the Restrictive Practices Court set up under the Act. The court includes laymen but is presided over by a High Court Judge. It is responsible for deciding whether or not an agreement is in the public interest. If the parties to an agreement fail to satisfy the court that their restrictions confer on the public one or more of the benefits set out in the Act, that these benefits outweigh the disadvantages of the restrictions and that the degree of restriction is not unreasonable, the agreement is declared void. The court can make orders preventing the parties from operating their agreement, or from making new arrangements having the same effect. The first full hearing before the court took place in October 1958.

Agreements relating exclusively to exports are not subject to this procedure but have to be notified to the Board of Trade.

Monopolies and other arrangements which are not within the scope of the Restrictive Practices Court may be referred by the Board of Trade to the Monopolies Commission for investigation and report. Production departments take appropriate action on the basis of these reports, subject to the approval of Parliament. The commission was originally set up by the Monopolies and Restrictive Practices (Inquiry and Control) Act, 1948, under the title of the Monopolies and Restrictive Practices Commission. Prior to the passing of the 1956 Act it had investigated a number of industries, several of which modified their practices in accordance with its recommendations. The 1956 Act excluded from the scope of the commission's work agreements which had to be registered under the new legislation. It is now mainly concerned with the investigation of monopolies.

One form of restrictive practice, the collective enforcement of resale price maintenance by the use of stoplists or boycotts, is prohibited by the 1956 Act. On the other hand, the Act strengthens the powers of individual suppliers to enforce their resale prices through the civil courts.

AGRICULTURE

Although Britain is a densely populated, industrialised country relying on imports for half its food supply, agriculture remains one of its largest and most important industries. It occupies nearly one million people, or over 4 per cent of those in civil employment, provides about 4 per cent of the gross national product, and uses 48 million of the 60 million acres of land.

THE LAND AND ITS USES

The land in general is highly fertile, and current agricultural practices, founded upon an age-old tradition of good husbandry improved by the application of modern scientific methods, result in some of the world's finest pedigree livestock and most successful varieties of seeds. Thus, Britain is the largest exporter of pedigree animals for breeding purposes; of some twenty breeds of cattle, sheep, pigs and farm horses of world-wide reputation, all but five or six originated in Britain.

The agricultural industry in Britain is less subject to serious dislocation caused by extreme climatic conditions than it is in some other countries; crops and livestock are seldom subjected to the dangers of drought, or floods, or severe cold. Nevertheless, abnormal weather does sometimes occur—for example, the severe winter of 1946–47 and the East Coast floods of 1953. In 1957 and 1958, production was adversely affected by unusually wet summers, while in 1959 exceptionally favourable weather was experienced.

Farms: Numbers and Ownership

There are about 506,000 agricultural holdings (excluding holdings consisting entirely of rough grazings) in the United Kingdom: 308,000 in England; 53,000 in Wales; 66,000 in Scotland; and 73,000 in Northern Ireland. About three-fifths of the total holdings are under 50 acres in size (crops and grass, excluding any area of rough grazings), but 96,000 (19 per cent) are over 100 acres and 16,000 (3 per cent) over 300 acres. Of nearly a million people employed in agriculture, about one-third are farmers, the rest being paid employees or members of the farmers' families.

Many farmers own their own land freehold, but the more usual arrangement is for a tenant farmer (who has a measure of security of tenure) to operate the farm and own the stock, crops and movable equipment, while the landlord owns the land, buildings, and fixed equipment, and is responsible for their maintenance and improvement. Returns made in 1950, for the purpose of the United Nations Food and Agriculture Organisation's World Census, showed that about 36 per cent of holdings in England and Wales were wholly owned by the occupier; 49 per cent were wholly rented and 15 per cent were part-owned and part-rented. The proportion of owner-occupiers was substantially higher in the case of holdings of under five acres, but did not vary appreciably from size group to size group in the case of the larger holdings. In Scotland, about 36 per cent of all holdings are wholly owner-occupied, 60 per cent are wholly rented and 4 per cent are part-owned and part-rented. In Northern Ireland, all farmers either own their holdings or are in the process of becoming owners. In general, farms in Britain are run as businesses, each by a single manager, usually the farmer himself. Most farmers belong to one or more of the various organisations, such as the National Farmers' Unions, which exist to represent their collective interests, and also to agricultural co-operative societies (see p. 278), which provide them with bulk-purchase and bulk-selling facilities.

Types of Farming

Types of farming vary with differences of soil and climate. Most of the better farming land is in the lowland areas of Britain.

In *England and Wales*, out of a total of 29.6 million acres of agricultural land, 24.5 million acres are under crops and grass, the remainder being rough grazings. Most farms are mixed farms, but in general the eastern half of England is devoted predominantly to arable, and the western half of England, together with Wales, to dairy farming. Dairy farming accounts for 37 per cent of agricultural land, arable for 22 per cent and mixed farming for 29 per cent, the remainder being unclassifiable or of little agricultural value. The chief crops, apart from grass, are wheat, barley, oats, potatoes, sugar beet and fodder crops. Market gardens are usually found near towns, but much of the vegetable production is now on arable and mixed farms. Fattening of animals for food is widespread but is carried on particularly in the south-eastern and eastern counties and the Midlands; stock-rearing is important in Wales and in the south-west and north of England.

In *Scotland*, out of a total of about 15 million acres of agricultural land, 4½ million acres are under crops and grass, the rest being rough hill grazings. The chief crop is oats; next come root crops for stock-feeding; potatoes, especially seed potatoes, and barley are also important crops. The area under wheat is small. In the south-west, dairying is the chief branch of the industry, while cropping and fattening cattle are carried on mainly in the east. The rearing of stock (especially sheep) is of importance in the hill areas.

In *Northern Ireland*, the total of 2.87 million acres of agricultural land in 1958 included 2.12 million acres under crops and pasture. The land is intensively farmed, the chief crops being oats, potatoes, barley and ryegrass for seed. Between 80 and 85 per cent of Northern Ireland's agricultural income is derived from live-stock and livestock products.

The use of agricultural land for the various crops and the numbers of livestock on farms in the United Kingdom since 1939 are shown in Tables 14 and 15 respectively. The map on p. 268 is intended to convey a general idea of the distribution of agricultural production. The actual pattern is neither as definite nor as static as might be inferred from it.

Horticulture

In June 1958, apart from private gardens and allotments, horticultural crops (excluding potatoes) were grown in the open on 746,000 acres in the United Kingdom, 296,000 acres being devoted to fruit, 420,000 acres to vegetables and 30,000 acres to flowers and nursery stock. The area of crops growing in glasshouses was 5,000 acres. The value of output in the crop year 1957-58 was estimated at £141.1 million, or about one-tenth of the value of the total agricultural output of the United Kingdom.

Although horticultural produce of one kind or another is grown on some 70,000 holdings, included in this number are many farms in the western counties of England on which cider apples are the only horticultural crop, while many arable farms in the eastern and south-eastern counties grow one or more vegetable crops as part of the rotation. The number of holdings on which horticulture is the main interest is therefore very much less than 70,000.

Most of the principal growing areas are within easy reach of the large industrial towns, the main centres of market gardening being in the Vale of Evesham (in Worcestershire), Bedfordshire, Kent, Essex and Lancashire. Farm production of peas and the coarser types of vegetables, such as carrots and winter cabbages, is mainly in the eastern counties from Yorkshire to Essex. Glasshouse production is

TABLE 14
USE OF AGRICULTURAL LAND IN THE UNITED KINGDOM 1939-58

				Million acres						
				1939	1944	1954	1955	1956	1957	1958
Wheat	..	..	..	1.8	3.2	2.5	1.9	2.3	2.1	2.2
Barley	..	..	..	1.0	2.0	2.1	2.3	2.3	2.6	2.8
Oats	..	..	..	2.4	3.7	2.6	2.6	2.6	2.4	2.2
Mixed corn	..	..	..	0.09	0.4	0.6	0.5	0.4	0.3	0.3
Rye	..	..	..	0.02	0.1	0.04	0.02	0.03	0.03	0.02
All cereals	..	..	..	5.3	9.4	7.8	7.3	7.6	7.4	7.5
Potatoes	..	..	..	0.7	1.4	0.9	0.9	0.9	0.8	0.8
Sugar beet	..	..	..	0.3	0.4	0.4	0.4	0.4	0.4	0.4
Fodder crops	..	..	..	1.3	2.0	1.5	1.4	1.4	1.3	1.2
Fruit	..	..	..	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Vegetables	..	..	..	0.3	0.5	0.4	0.5	0.5	0.4	0.4
Other crops	..	..	..	0.2	0.4	0.3	0.2	0.2	0.3	0.3
Bare fallow	..	..	..	0.4	0.2	0.3	0.3	0.2	0.3	0.3
Total tillage	..	..	..	8.8	14.6	11.9	11.3	11.5	11.2	11.2
Temporary grass(a)	..	..	..	4.1	4.7	6.0	6.2	6.1	6.3	6.3
Total arable land	..	..	..	12.9	19.3	17.9	17.5	17.6	17.5	17.5
Permanent grass	..	..	..	18.8	11.7	13.2	13.5	13.5	13.5	13.5
TOTALS: Crops and Grass	..	..	..	31.7	31.0	31.1	31.0	31.1	31.0	31.0
Rough Grazings	..	..	..	16.5	17.0	16.9	16.9	16.8	16.8	16.9

Source: *Monthly Digest of Statistics*.

(a) Includes lucerne, except in 1939 when it was included in 'other crops'.

TABLE 15
LIVESTOCK IN THE UNITED KINGDOM 1939-58 (a)

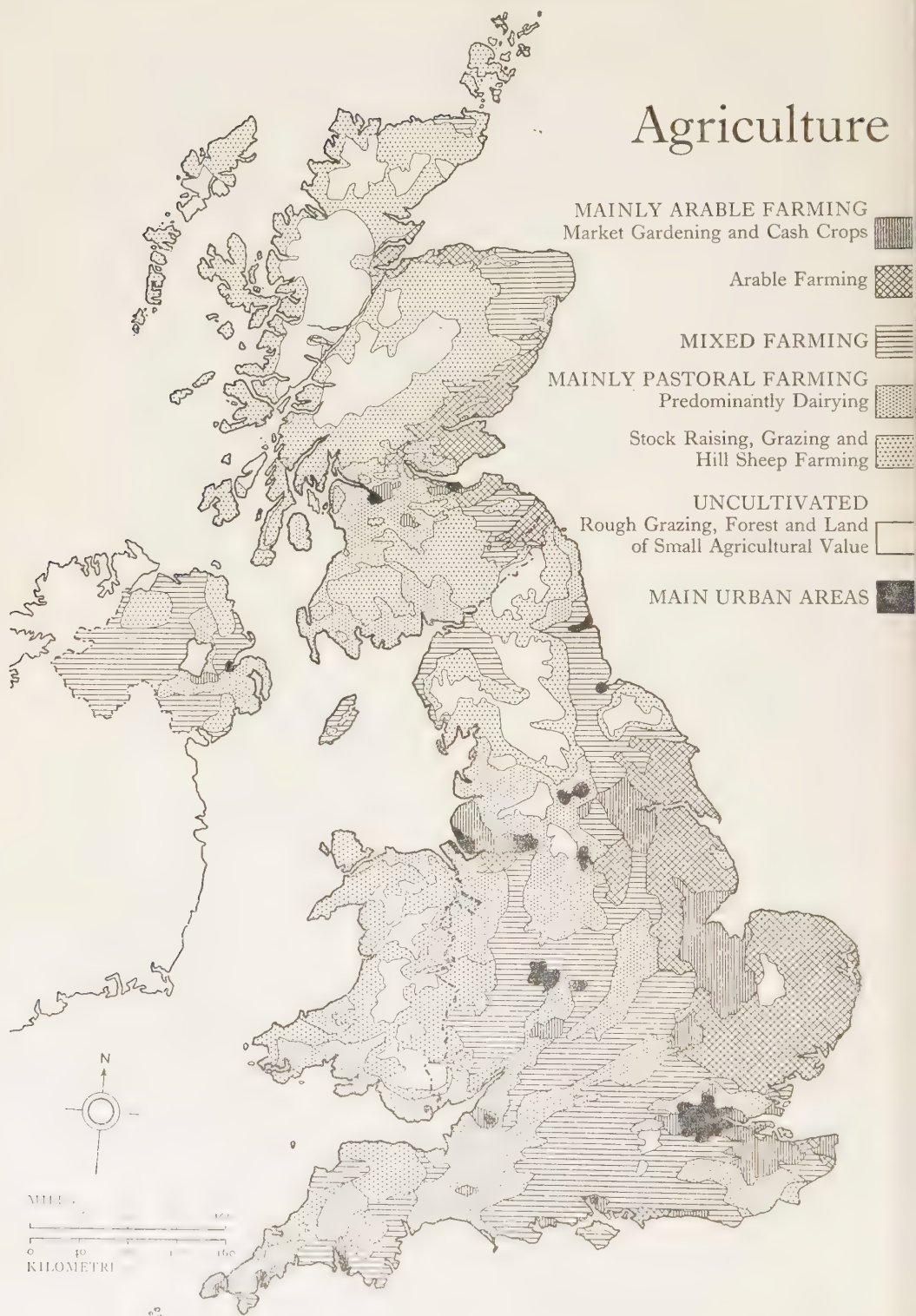
										Millions
				1939	1944	1954	1955	1956	1957	1958
Dairy cattle	..	..	..	3.9	4.4	4.6	4.5	4.7	4.7	4.6
Other cattle	..	..	..	5.0	5.1	6.2	6.2	6.2	6.2	6.3
Sheep	..	..	..	26.9	20.1	22.9	22.9	23.6	24.8	26.1
Pigs	..	..	..	4.4	1.9	6.3	5.8	5.5	6.0	6.5
Poultry	..	..	..	74.4	55.1	83.6	86.9	92.5	94.9	99.7

Source: *Monthly Digest of Statistics*.

(a) At the annual June census.

widespread, but the main centres are in the Lea Valley (north of London), in Sussex, in Lancashire and in the Channel Islands. Kent is the chief county for fruit, particularly cherries and apples. Devon and Hereford are renowned for cider apples and Worcestershire for plums. For soft fruits, important growing areas

Agriculture



include East Anglia (blackcurrants), Cambridgeshire and Norfolk (strawberries), and eastern Scotland (raspberries).

Early vegetables come from Cornwall and the Channel Islands, and early flowers (grown in the open) from the Isles of Scilly.

Smallholdings and Allotments

There are some 17,000 smallholdings in England and Wales provided by county councils and county borough councils and by the Ministry of Agriculture, Fisheries and Food. Of these, about 9,500 are capable of providing a full-time occupation for the tenant. These smallholdings are let only to people with practical experience in agriculture, preferably agricultural workers, with the object of affording them an opportunity to become farmers on their own account. Loans may be made to the tenants of up to 75 per cent of the working capital they require.

Of the smallholdings provided by the ministry, approximately 1,000 situated on 18 different estates are managed by the Land Settlement Association Limited, which was originally formed in 1934 to develop smallholdings for unemployed men from industrial areas. The association provides centrally on each estate various services for the tenants' use, including the supply of agricultural stores and requisites, the operation of a machinery pool, and the packing and marketing of produce.

The Welsh Land Settlement Society, which was also formed to assist in the settlement on the land of unemployed industrial workers, created a number of profit-sharing farms, which are still in operation.

Land settlement in Scotland has always been carried out by the central Government, which now owns and maintains some 432,000 acres of Land Settlement Estates with over 4,000 holdings.

There are also nearly one million allotments in the United Kingdom; most of these are allotment gardens¹ and about half are permanent statutory allotments provided by local authorities who, under the Allotments Acts, have the duty to provide allotments, if practicable, wherever there is a need.

The growing of vegetables and fruit and the keeping of small livestock such as poultry, rabbits, bees, pigs and goats by gardeners and allotment-holders is widespread in Britain. Voluntary organisations exist to provide advice, guidance and trading facilities and generally to assist those interested in such activities. The *National Council for Domestic Food Production*, formed in 1951 by the Minister of Agriculture, co-ordinates the work of these organisations and encourages the development of domestic food production as a form of self-help, which also provides social and recreational benefits.

Changes since 1870

In the middle of the nineteenth century Britain was largely self-sufficient in agricultural production. Then, wool, grain and, later, meat—all produced cheaply from virgin lands overseas—were increasingly imported and, as a result, the farming industry had to adapt itself to the changing conditions by concentrating much more on milk, eggs, pigs and horticultural produce. These changes in production and types of farming, in successive attempts to meet changes of fortune, resulted in a continuous trend away from an agricultural industry based mainly on grain to one based more on livestock and livestock products and, among crops, with an increasing emphasis on vegetables.

¹ An allotment garden is a piece of land not bigger than a quarter of an acre which is wholly or mainly cultivated by the occupier for the production of vegetable or fruit crops for consumption in his own home.

The arable area in Britain declined continuously from 1872 until 1939, except during the first world war; the meat, dairy and poultry industries becoming increasingly dependent on imported feedingstuffs. The outbreak of the second world war was, however, followed by an immediate reversal of farming practice, for shortage of shipping space for imports demanded a greatly increased home production of crops for direct human consumption, such as wheat and potatoes, largely at the expense of livestock and livestock products other than milk. The post-war world food shortage and Britain's balance of payments problems made it necessary for Britain to maintain increased grain production but, since 1947, an expansion of output of livestock, livestock products and animal feedingstuffs has been encouraged concurrently with the maintenance of a high level of production of grain and other crops.

PRODUCTION

Before the second world war, Britain produced about 31 per cent of its food supply (in terms of calories for human consumption). By 1958 this had risen to nearly 40 per cent, and in terms of value represented about one-half compared with a little over one-third before the war. The percentages by weight of total supplies of certain foods provided by home production in post-war years compared with the pre-war average are shown in Table 16. Imports of food and feedingstuffs (including oils and oilseeds) accounted for 45 per cent of total imports pre-war and 40 per cent in 1958. The United Kingdom is the world's largest importer of agricultural produce. Its level of tariffs is in general very low, and quota restrictions are few.

TABLE 16
PERCENTAGE OF TOTAL U.K. FOOD SUPPLIES PROVIDED BY
HOME AGRICULTURE

Food Product	Pre-war average	1945	1951	1957	1958 (prov.)
Wheat and flour for human consumption (as wheat equivalent)	12	32	24	21	19
Oils and fats (crude oil equivalent)	16	7	10	16	18
Sugar (refined value)	18	32	23	19	18
Carcase meat and offal	51	50	65	63	65
Bacon and ham (excluding canned)	32	38	49	42	42
Butter	9	8	4	11	8
Cheese	24	10	18	48	45
Condensed milk	70	59	63	99	98
Dried milk (whole and skimmed) ..	59	49	43	57	51
Shell eggs	71	87	86	99	99
Milk for human consumption (as liquid)	100	100	100	100	100
Potatoes for human consumption ..	94	100	97	95	84

Source: Ministry of Agriculture, Fisheries and Food.

Production trends since the war for some of the main agricultural products are shown in Table 17. An increase in agricultural production of over 60 per cent since the years immediately before the second world war has been achieved in spite of a slow decline in the agricultural labour force since the war. There has, in fact, been a very large increase in productivity, due to improved crop and livestock varieties, more intensive use of fertilisers, pesticides and fungicides, and greatly increased

mechanisation, which has made it possible to work much larger acreages of arable land. Higher agricultural production and productivity has been a major objective of Government policy, and has been fostered by assurances, inducements, advisory services, controls and other measures.

In the United Kingdom, the estimated average yields per acre in the three years 1956-57 to 1958-59 were 24.9 cwt. for wheat and 23.2 cwt. for barley compared with 21.7 cwt. and 20.1 cwt. in the three years 1949-50 to 1951-52.

The estimated average yield of milk per cow was 638 gallons in the three years 1955-56 to 1957-58 compared with 586 gallons in the three years 1949-50 to 1951-52. In the same periods, the estimated average yield of eggs for each laying fowl was 171 and 136 respectively.

The output per acre of horticultural produce is also considerably higher than it was before the second world war. About 80 per cent of total supplies of vegetables and 45 per cent of fruit are home grown. In 1958, output was estimated at 2,564,000 tons of vegetables and 950,000 tons of fruit.

TABLE 17
AGRICULTURAL PRODUCTION IN THE UNITED KINGDOM
(Years beginning 1st June)

Product	Unit	Pre-war average 1936-38	1955-56	1956-57	1957-58	1958-59 forecast
<i>Crop Production:</i>						
Wheat	'000 tons	1,651	2,599	2,845	2,683	2,711
Rye	"	10	19	25	24	21
Barley	"	765	2,936	2,800	2,957	3,170
Oats	"	1,940	2,709	2,486	2,145	2,138
Mixed corn ..	"	76	510	407	325	275
Potatoes	"	4,873	6,278	7,533	5,691	5,556
Sugar beet ..	"	2,741	4,556	5,169	4,539	5,742
<i>Livestock Products:</i>						
Milk	mill. gals.	1,556	2,206	2,359	2,392	2,252
Eggs (a)	'000 tons	385	581	636	660	695
Beef and veal ..	"	578	687	849	887	783
Mutton and lamb ..	"	195	191	197	208	200
Pigmeat (a) ..	"	435	659	641	690	726
Wool (clip) ..	"	34	31	31	35	36
<i>Index of net agricultural output</i>						
Agricultural holdings(b) ..	—	100	155	160	160(c)	159
Total(a)	—	100	156	161	162(c)	161

Source: Cmnd. 696, and Agricultural Departments.

(a) Includes estimated production from units under one acre.

(b) In Great Britain holdings of over one acre only; in Northern Ireland one acre and over from 1955-56, for earlier years $\frac{1}{4}$ acre and over.

(c) Provisional.

Farm Incomes and Expenditure

Estimates of farm expenses and sales and of the net incomes of farmers are prepared annually by the Ministry of Agriculture, Fisheries and Food in connection with its annual review of the industry (see pp. 279-80). The calculations for 1958-59 forecast a total gross agricultural revenue of £1,574 million. Farm expenses are forecast at £1,247 million, giving an aggregate net income of £327 million, or £360.5 million if adjusted for normal weather conditions.

The largest item in farm expenses is feedingstuffs (in 1958-59, £348.5 million), followed by labour (£314.5 million) and machinery costs (£220.5 million). Rising expenditure on feedingstuffs has accompanied the increase in gross earnings from fatstock (£443.5 million in 1958-59 compared with £337 million in 1952-53) and eggs and poultry (£215.5 million against £163 million in 1952-53). Income from farm crops (£284.5 million) and milk and milk products (£339.5 million) has undergone much smaller changes.

Mechanisation

The estimated number of tractors (excluding small market-garden types) in the United Kingdom in 1925 was about 21,000, in 1939 about 55,000, and in 1958 about 460,000. Britain has one of the greatest tractor densities in the world, one tractor to about 38 acres of arable land. The increase in some of the newer types of agricultural machines has been even more notable; thus it is estimated that about 43,000 combined harvester-threshers were in use in the 1958 harvest; in 1939 there were only 150. In a climate such as Britain's, the widespread use of these combines has given rise to extensive installation of drying and storage facilities for grain.

Great progress has been made in the development of a wide range of equipment to assist the production of grass in the various forms—silage, hay and dried grass—upon which British farm livestock very largely depends for winter fodder.

Electrical equipment, such as milking machines, has gained rapidly in popularity in recent years and considerable use is made of mechanical handling equipment for milk. In 1958, 76 per cent of farmers in England and Wales, and 73 per cent in Scotland were supplied with electricity. In Northern Ireland the percentage was 26.

THE ROLE OF THE GOVERNMENT

The Government has wide functions in relation to agriculture, most of them exercised by the agricultural ministers, i.e. the Minister of Agriculture, Fisheries and Food in England and Wales, the Secretary of State for Scotland, and, in Northern Ireland, the Home Secretary, who is the minister responsible for United Kingdom aspects of Northern Ireland agriculture, local aspects being the responsibility of the Northern Ireland Minister of Agriculture.

The severe agricultural depression which followed the fall in the general price level after 1920 resulted in the introduction during the 1930s of forms of protection and financial assistance for agriculture. Commodity commissions were set up for sugar beet, wheat and livestock, with the responsibility of administering Government subsidies or other forms of direct financial assistance for the production of those commodities. In addition, producer-controlled marketing boards were established with powers to regulate the marketing of milk, pigs and bacon, hops and potatoes and, in 1937, the Government assumed powers to pay acreage subsidies to assist producers of barley and oats.

During the second world war and the immediate post-war years, agricultural production and marketing were closely controlled by the State, and County War Agricultural Executive Committees, composed of local representatives of agricul-

tural interests, acted as the Government's local agents, as did similar committees during the first world war. As a result of Government control, the functions of marketing boards and commodity commissions were largely suspended. Most of these organisations have now had their powers restored to them or their functions have been superseded by other arrangements.

The main objective of United Kingdom agricultural policy continues to be that set out in Section I of the Agriculture Act, 1947, namely—'a stable and efficient agricultural industry capable of producing such part of the nation's food and other agricultural produce as in the national interest it is desirable to produce in the United Kingdom, and of producing it at minimum prices consistent with proper remuneration and living conditions for farmers and workers in agriculture and an adequate return on capital invested in the industry'. To this end, the Government is empowered to provide guaranteed prices, determined in the light of annual reviews (see pp. 279–82), for the main agricultural products and to afford a measure of security of tenure to tenant farmers. In return, farmers and landowners are expected to maintain efficiency in husbandry and estate management. The agricultural ministers had powers, exercised through the Agricultural Executive Committees (see below), but repealed in 1958, to enforce minimum standards of efficiency by supervision and direction and eventually by dispossession. The Government promotes efficiency by providing technical advisory services, and also various grants to farmers and landowners in respect of certain operations and requisites designed to improve productivity.

The Agriculture Act, 1947, was introduced at a time of food shortage and was administered at first in conjunction with a system of State purchase of food, far-reaching controls over agricultural production and marketing, and food rationing. Agricultural policy was aimed primarily at increasing output, which in fact by 1952 was 50 per cent above the pre-war level. As world supplies of food and Britain's own agricultural production and trading position improved, the Government gradually restored to private business both the import of food and all domestic trading in food. All consumer rationing of food in Britain ended on 3rd July, 1954.

With the ending of the period of scarcity, policy objectives have undergone a change of emphasis. In recent years, stress has been laid on the need for more economic production adapted to market requirements, increased technical efficiency, and economies in the use of imported feedingsuffs, rather than on an indiscriminate expansion of production.

In 1959, after its annual review of the industry, the Government's view was that development should proceed in the following directions:

- (1) the maintenance of the arable acreage at roughly its present size, but with less emphasis on wheat and rye than on barley and on other feed crops;
- (2) greater reliance on home-grown feed for livestock;
- (3) production of more beef of the quality wanted by the market;
- (4) reduction in costs of producing lamb and pigmeat; and
- (5) less production of milk and eggs.

The Government's long-term objective is to achieve a steady improvement in the competitive position of the industry.

County Agricultural Executive Committees

In England and Wales, County Agricultural Executive Committees (CAECs), which superseded the County War Agricultural Executive Committees, were set up under the provision of the Agriculture Act, 1947. In Scotland, 11 similar bodies, known as Agricultural Executive Committees, were set up; while in Northern

Ireland each county has a Committee of Agriculture which acts mainly in an advisory capacity to the Northern Ireland Ministry of Agriculture. An agricultural executive officer, working directly under the Northern Ireland Ministry of Agriculture, is responsible for carrying out the Government's agricultural policy in each county.

Each county agricultural executive committee in England and Wales consists of 12 members. Five are appointed directly by the minister, and seven from panels nominated by the interests concerned, three being farmers, two landowners and two agricultural workers. The committees, most of which are represented locally by district committees, are charged with promoting agricultural development and efficiency. In the past, they were partly concerned with the administration of controls, partly with the administration of trading services, subsidies and routine executive work, and partly with technical advice to farmers. Some of these functions have now lapsed, and the administration of trading services, subsidies and routine executive work is left to officials. Their main tasks are now to assist the technical services of the Ministry of Agriculture, Fisheries and Food in promoting technical development; to give advice and assistance on local agricultural problems; and to advise on the administration of certain grant and subsidy schemes and on the development and local application of policy. They also retain certain statutory and executive functions, the chief of which are the registration and licensing of milk producers, and the control of land and bird pests.

The Crofters Commission

In the seven Scottish counties known as crofting counties—Argyll, Caithness, Inverness, Orkney, Ross and Cromarty, Sutherland and Shetland—much of the land is farmed by crofters, tenant farmers whose holdings are either rented at a cost of not more than £50 a year or have an area not exceeding 50 acres.

In these counties there are about 20,000 crofts, which produce about one-quarter of the total agricultural output of the area. The special problems of the crofting counties, which had for some time been suffering from a declining population and falling agricultural production, led to the setting up, under the Crofters (Scotland) Act, 1955, of a Crofters Commission whose functions are to reorganise, develop and regulate crofting in the crofting counties, to promote the interests of crofters and to keep under review matters relating to crofting. When a croft becomes vacant, the landlord must advise the Crofters Commission of his proposals for letting the croft; the commission has power to approve or veto these proposals, to require that a vacant croft be let as an enlargement to another croft, and generally to ensure that all vacant crofts are let in the best interest of the crofting communities. For the same purpose the commission has power to dispossess absentee tenants who are, however, able to retain their croft houses in certain circumstances. It may authorise the granting of feus (pieces of land held on a perpetual lease at a fixed rent) to aged and infirm crofters who wish to give up their land but to retain their houses. The commission has power to carry out reorganisation schemes in derelict or decaying 'townships', if a majority of the resident crofters agree, by reallocating the land in a way which, in the commission's opinion, would lead to the proper and efficient use of the land and the general benefit of the township. The commission has powers to ensure that crofters work their crofts according to the rules of good husbandry, and it is responsible for approving regulations governing the use of common grazings. It acts as agent for the Secretary of State for Scotland in the administration of schemes of loans and grants for the development of agricultural production on crofts, and collaborates with other bodies in carrying out measures for economic development and social improvement in crofting areas.

As part of a development plan for the Highlands of Scotland, announced in June 1959, the annual payment for improvement grants for crofters is to be increased by £100,000 to £500,000, to enable the Crofters Commission to meet applications.

The Agricultural Land Commission

The Agricultural Land Commission was set up under the Agriculture Act, 1947, to manage lands vested in the then Minister of Agriculture and Fisheries, or land for which he has become responsible, and to advise and assist the minister in matters relating to the management of agricultural land. The commission's functions in Wales are delegated to the Welsh Agricultural Land Sub-Commission. Early in 1954 the minister decided, after consultation with the commission, to sell land managed by it wherever that could suitably be done. At 31st March, 1959, 163,409 acres were under the control of the commission and almost all of this land was let to private farmers. A little over half of the land was agricultural land intermixed with other land used by the Forestry Commission. About one-eighth consisted of disused airfields and other land formerly held by various Government departments; almost a quarter comprised an estate accepted by the Government in lieu of death duties; and the remainder was mostly land acquired by the minister to ensure its full and efficient use for agriculture.

In Scotland, the management of lands vested in the Secretary of State and the duty of advising him on management matters are carried out by the Department of Agriculture.

Security of Tenure

Successful farming is a long-term business, and adequate security of tenure helps the good farmer to plan ahead. The effect of the legislation passed after the war was to give the farming tenant a considerable measure of security.

In England and Wales, the Agricultural Holdings Act, 1923, had required that normally at least twelve months' notice should be given to quit an agricultural holding and gave the tenant a right to claim compensation for disturbance, but not to contest the notice to quit. The Agricultural Holdings Act, 1948, gave the tenant the right in most cases to contest a notice to quit, which could then be enforced only with the consent of a county agricultural executive committee (acting for the minister); there was a right of appeal by either party to an Agricultural Land Tribunal (an independent judicial body appointed by the Lord Chancellor and composed of a chairman and two members representing landowners and farmers respectively). The parallel Scottish Act applied similar provisions to Scotland, with a right of appeal to the Scottish Land Court. The Agriculture Act, 1958, transferred the adjudicatory functions of the County Agricultural Executive Committees to the Agricultural Land Tribunals and the Scottish Land Court, and made amendments to the law on notice to quit, designed to make it less difficult for the landlord to obtain possession of a holding from an indifferent tenant, while continuing to give security to the good farmer. At the same time the Act gave tenants, in England and Wales, an important new right by enabling them in most cases to apply to the appropriate agricultural land tribunal for a direction to the landlord to provide equipment necessary to enable the tenant to comply with statutory requirements such as the safety, health and welfare regulations. A further change under the Act was the transfer to the Lord Chancellor of the functions in respect of agricultural land tribunals which formerly devolved on the minister.

Rents are normally fixed by agreement between the landlord and tenant; where agreement cannot be reached, the minister has power, on the application of either party, to appoint an arbitrator, who is required to fix a sum in accordance with the

rent at which the holding might reasonably be expected to be let by a willing landlord in the open market to a willing tenant. The arbitrator must, however, ignore any improvements or dilapidations caused by the tenant and any landlord's improvements in so far as grants have been made from public funds.

IMPROVEMENT OF CROPS AND LIVESTOCK

Crops and Grass

Improved varieties, the use of new insecticides, fungicides and herbicides, together with advances in methods of husbandry have led to a steady improvement in the yield of cereals.

New varieties of crops and seeds are tested at the National Institute of Agricultural Botany, Cambridge, maintained by the Ministry of Agriculture, Fisheries and Food.

Research at the Grassland Research Institute (Hurley, Berkshire) and elsewhere has directly influenced agricultural practice in the production and use of grass. Improved management of both permanent grass and temporary grass leys and the more effective utilisation of grass by means of ensilage or drying, together with the extended use of fodder crops, such as kale, help to economise in the use of purchased feedingstuffs.

Cattle and Sheep

Britain is noted for its exports of pedigree livestock and since the end of the second world war there has been a marked recovery of the export trade in livestock of high quality.

It is mainly the beef breeds of cattle (particularly Shorthorns, Herefords and Aberdeen Angus) which have made a reputation overseas, but interest in British dairy stock (e.g., Guernsey, Jersey and Ayrshire) is increasing. At home, the rise in milk consumption since 1940 resulted for a time in concentration on dairy breeds, but many breeds have maintained the dual-purpose type of qualifications. A recent development has been the increased mating of bulls of beef breeds with commercial dairy cows for producing calves of better quality for the beef market. In Scotland, while milk production has expanded, an even greater increase in numbers of beef cattle has taken place. In areas where small farms predominate, grants are provided for approved sires, and there are special schemes in the Highlands and Islands for the loan or hire of bulls and rams to communities of smallholders. Grants for approved bulls are also given in England and Wales. The rearing of cattle for beef in the United Kingdom is encouraged by subsidies on calves suitable for beef production and on hill cows in regular breeding herds. If the economic position of hill sheep farming justifies it, a subsidy is also paid on ewes in hill flocks.

In order to ensure sound breeding, bulls have to be licensed. Artificial Insemination (AI) Centres, which are also licensed, cover the whole of England and Wales; the majority are operated by the Milk Marketing Board (see p. 280), others by local breeders' associations and two by the Ministry of Agriculture. One calf in every two born in England and Wales is the result of AI. Licensed centres also operate in Scotland. In Northern Ireland, AI is carried out at centres under the control of the Northern Ireland Ministry of Agriculture.

Premiums are paid to producers of tuberculin tested (TT) milk and for attested herds.

Development of the Pig Industry

In September 1957, a Pig Industry Development Authority was set up in Great Britain under the Agriculture Act, 1957, to promote improvements in the pro-

duction, processing and distribution of pigs and of pigmeat. The authority consists of 17 members appointed by the agricultural ministers, of whom three (including the chairman) are independent, and the remainder are appointed to represent various interests in the industry. The authority is empowered to promote schemes to improve pig production, including the development of an artificial insemination service for pigs; to sponsor research and development work, including market intelligence; and to encourage the adoption of grading standards for pigs and pig products. To finance its activities, which are expected to cost rather less than £500,000 annually in the early years, the authority has, with the approval of Parliament, introduced a scheme imposing a levy on the industry. In Northern Ireland, the Ministry of Agriculture (Northern Ireland) in consultation with the Pig Advisory Committee—a statutory body—is responsible for functions similar to those of the authority in Great Britain.

Poultry Breeding

To raise the standard of poultry stock there is a Poultry Stock Improvement Plan in England and Wales under which breeding stations and hatcheries are accredited. There are three official poultry progeny testing stations in England and Wales, and one in Scotland, which has its own accreditation scheme for breeders and hatcheries. A similar scheme is operated in Northern Ireland.

Bloodstock

The United Kingdom remains, despite increasing international competition, the world's greatest exporter of bloodstock. The Government operates the National Stud at bloodstock breeding establishments at Gillingham in Dorset and at West Grinstead in Sussex. Exports of horses and ponies (including horses exported temporarily for racing, breeding and other purposes, and re-exports) were valued at £6.5 million in 1958 compared with £5.6 million in 1957.

Control of Animal Diseases

Under a plan introduced in October 1950 for the eradication of bovine tuberculosis on an area basis, many areas have already been cleared. It was expected that by the end of 1959 Scotland and Wales would have become fully attested. The whole of Great Britain should be an attested area by 1961, if not earlier; and Northern Ireland, which has had an Attested Herds Scheme in operation since 1949, hopes to achieve this position at about the same time.

The Diseases of Animals Act, 1950, gives the Government wide powers for the control of diseases. This control may take the form of regulation of internal movements of stock, or of compulsory slaughter of animals and poultry affected by certain notifiable diseases (e.g., foot-and-mouth disease and fowl pest). Compensation is generally payable for stock slaughtered, although there are exceptions. The Act, and orders made under it, also restrict the import of certain types of livestock, animal products and veterinary therapeutic substances. Research into animal diseases is carried on at several centres, including one at Pirbright, Surrey, which has been made the world reference laboratory for foot-and-mouth disease.

MARKETING

During the second world war and for some years after, marketing of nearly all farm crops was closely controlled by the Government. Most of the direct controls over marketing were progressively removed and the majority of agricultural products are now disposed of through the normal channels of trade, for example, through corn merchants, livestock auctions and markets, and bacon factories.

For certain commodities, however, statutory marketing arrangements, such as the setting up of marketing boards, have been made, while for all the main agricultural products (but not for horticultural produce) the Government operates a system of price guarantees (see pp. 279-82).

Marketing Boards

Marketing boards set up under the Agricultural Marketing Act, 1958 (which consolidated earlier legislation), are producers' organisations with powers to regulate the marketing of particular agricultural products. The schemes under which they are constituted and operated must be approved by Parliament and confirmed by a poll of the producers concerned. For the most part, a marketing board consists of members elected by producers, but not fewer than two members and not more than one-fifth of the total number must be appointed by the minister or ministers concerned.

Marketing boards fall into two categories according to the kind of powers conferred on them by the schemes. There are full trading boards which have the power to become the first selling agency of producers' produce, and there are regulatory boards which exercise control over marketing by producers themselves. The boards for eggs, hops, milk and wool are full trading boards and those for potatoes, and tomatoes and cucumbers are regulatory boards.

The pre-war pigs and bacon marketing schemes, which had been suspended since 1939, were revoked in December 1957 after the Pig Industry Development Authority had been set up.

In general, the Government has declared that it will consider sympathetically proposals for producer marketing boards, although each commodity has to be considered on its merits. In appropriate cases the Government is also prepared to allow price guarantees to be operated through marketing boards, and such arrangements are operated by the boards for eggs, milk, potatoes and wool (see pp. 280-1).

Statutory consumers' committees represent consumers' interests affected by the operation of marketing schemes, and committees of investigation consider reports of consumers' committees and complaints from persons other than consumers affected by the operation of the schemes. The ministers have powers to amend or revoke schemes, or to serve directions on a board, when this is recommended by a committee of investigation. The ministers also have powers to issue directives if it is considered that the public interest is affected adversely by a board's restrictive use of certain of its main marketing powers.

Agricultural Co-operatives

The main types of agricultural co-operatives are those supplying members' requirements (e.g., fertilisers and feedingstuffs), those marketing members' produce (e.g., wool and eggs) and those providing services to members (e.g., grain drying and cattle breeding). Horticultural co-operatives have been set up in some areas to market produce either by auction or through existing wholesale channels. Many of these societies also sell farm requisites. There are some 244 societies in England and 85 in Wales with a total turnover of some £129 million and £14 million respectively. There are also co-operative machinery syndicates, woodlands societies, and many rabbit clearance societies.

The Agricultural Central Co-operative Association Ltd. is the body which, with the support of the National Farmers' Union, co-ordinates and represents agricultural co-operatives in England. In Wales, similar functions are performed by the Welsh Agricultural Organisation Society Ltd. These associations, together

with the Scottish Agricultural Organisation Society and the Ulster Agricultural Organisation Society, are members of the Federation of Agricultural Co-operatives in Great Britain and Ireland. Another member of the federation, the Horace Plunkett Foundation, founded in 1919, is also concerned with the furthering of agricultural co-operation.

Regulation of Milk Distribution

Milk distributors in Great Britain must be registered, and regulations lay down conditions under which milk is produced, handled, treated, stored and distributed. Subject to licence, milk may be sold under special designations—'Pasteurised', 'Sterilised', 'Tuberculin Tested' (TT) and also, in Scotland only, 'Certified'.

In areas specified by statutory orders it is obligatory to retail only specially designated milk; milk which is not sold as tuberculin tested (or, in Scotland, as certified) must be heat-treated. In Great Britain, 90 per cent of the population now drink tuberculin tested, pasteurised or sterilised milk. The whole of Northern Ireland is now a 'safe milk' area. Retail prices of milk and distributors' profit margins throughout the United Kingdom are controlled by the Government.

Horticulture

In July 1958, the Minister of Agriculture, Fisheries and Food appointed an interim Horticultural Marketing Advisory Council for England and Wales to advise him on the work of his department on horticultural marketing, to consider plans for a permanent Horticultural Marketing Council representing all sections of the horticultural industry, and to report annually. The establishment of such a council had been recommended in the report of the Committee on Horticultural Marketing (the Runciman Committee), published in January 1957.

Livestock

Although no statutory scheme has been adopted for fatstock marketing, a Fatstock Marketing Corporation was set up in 1954, under the sponsorship of the farmers' unions, as an alternative to the auction system. The corporation pays prices to farmers which include the guarantee and collects the guarantee payment from the Government. Besides its London organisation, it has nine area organisations and more than 100 sales centres throughout Britain. Members of its main board are elected from persons nominated by the farmers' unions and from its own members.

PRICE GUARANTEES

Guaranteed prices in various forms are provided for cereals, fatstock, milk, eggs, potatoes, wool and sugar beet. There are no price guarantees for horticultural products, for which tariffs and import quotas are the usual form of protection. The guaranteed prices are determined at annual reviews of the economic conditions and prospects of the agricultural industry, which are held, in accordance with Part I of the Agriculture Act, 1947, by the agricultural ministers in consultation with farmers' representatives. The Act also provides for a special review to be held at any time if the ministers concerned consider that it is warranted by a sudden change in the economic conditions of the industry, such as a substantial alteration in production costs. In addition, long-term assurances for agriculture were provided by the Agriculture Act, 1957, following recognition by the Government at the 1956 Annual Review that price guarantees based on annual reviews were too short-term to afford an adequate basis for the forward planning necessary for efficiency.

The annual reviews are normally held in February and March, and the resulting guaranteed prices apply to livestock and livestock products for the ensuing twelve months and (since 1957) to crops to be harvested in the current year. The Government's conclusions from each annual review and its decisions on changes in guaranteed prices and production grants are published as a White Paper.

The long-term assurances provided for in the 1957 Act require that the total value of the guaranteed prices and relevant production grants in any year shall be maintained at not less than 97.5 per cent of their value in the preceding year, after allowing for changes that have occurred in the cost of review commodities since the last annual review. In addition, the guaranteed price (adjusted for any change in the basis of the guarantee) for each review commodity must be maintained at not less than 96 per cent of that of the previous year, with a provision, in the case of livestock and livestock products, that, in any period of three years, reductions in the guaranteed price for a particular commodity will not total more than 9 per cent.

The general policy of the Government is to avoid direct intervention in the market and therefore to use methods of agricultural support that leave the ordinary channels of trade to operate freely. The form of price guarantee most generally used is the deficiency payments system, under which the Government makes payments to producers, equal to the differences between the average market price realised and the guaranteed price, for output eligible for the guarantee.

Arrangements for Individual Commodities

The detailed arrangements vary for different commodities.

Cereals and Fatstock. Deficiency payments schemes, administered directly by the agricultural departments, are in operation for cereals and fatstock. Under the cereals scheme, the payments are made on the quantity of millable wheat or rye sold and delivered by individual growers to authorised merchants; the guaranteed price for wheat varies seasonally. For barley and oats, any deficiency between the guaranteed price and the average market price is converted to a rate per acre and payments are made according to individual growers' acreages. Under the fatstock guarantee scheme, the guaranteed prices apply to fat cattle (steers and heifers), fat sheep (including hoggets, i.e. yearling sheep, and lambs) and fat pigs. The guaranteed price for cattle and sheep varies according to a seasonal scale of standard prices. Guarantee payments are made each week on stock which has been certified as eligible under the scheme.

Milk. The price guarantee for milk is implemented through five Milk Marketing Boards in the United Kingdom—one for England and Wales, three for Scotland and one for Northern Ireland. Those in England and Wales and in Scotland were set up under pre-war schemes, and marketing powers suspended during the war were restored to them in 1954. The Milk Marketing Board for Northern Ireland was set up in 1955. The Government pays each board any deficit between its net commercial returns and its entitlement under the guarantee, subject to a profit and loss sharing arrangement designed to encourage efficient marketing. The retail price of milk for liquid consumption is controlled by the Government, but for any surplus milk sold for manufacturing purposes (e.g., for butter, cheese and dried milk) the Milk Marketing Boards are free to secure the best return possible. The price for milk guaranteed to each board applies only to a specified quantity; sales in excess of this quantity reduce the average cash return received by producers.

Eggs. For eggs, the price guarantee is implemented by means of a flat rate subsidy payable to the British Egg Marketing Board for eggs sold to the board

through packing stations. Only eggs sold to the board qualify for the guarantee. The rates of subsidy are calculated by subtracting from the guaranteed price (determined in the light of the annual review) the average price which it is estimated that the board will receive from its sales of fresh eggs in the ensuing year. There is a profit and loss sharing arrangement designed to encourage efficient marketing.

The marketing scheme for eggs came into force on 31st December, 1956, and applies to the whole of the United Kingdom, covering all producers with more than 50 head of live poultry over the age of six months. In general, registered producers must sell their eggs to the British Egg Marketing Board through packing stations where the eggs are graded, tested and stamped, but those who wish to sell eggs direct to consumers or retailers are entitled to a licence authorising them to do so, subject to certain conditions which the board may impose.

Wool. The wool guarantee is operated through the British Wool Marketing Board, which is responsible for the marketing of all fleece wool (wool shorn from live sheep) produced in the United Kingdom, except in Shetland where, since the wool from Shetland sheep is of a special kind, producers have to make their own private marketing arrangements. A guaranteed price to the board for each pound of wool it handles enables it to fix producers' prices in advance, after making an allowance for its marketing costs. Receipts in excess of the guarantee are paid into a price stabilisation fund. Any deficiency between the guaranteed price and the board's receipts from the sale of the wool is met in the first instance from the stabilisation fund; when this limit is exceeded, any deficiency is met by the Exchequer.

Potatoes. A new system of price guarantees for potatoes came into operation in July 1959 (see below). Under the previous price support system (a revised version of a pre-war scheme) which had come into force in May 1955, the Potato Marketing Board in Great Britain (acting for the Government) and the Ministry of Agriculture for Northern Ireland were prepared to buy at the appropriate guaranteed price any potatoes offered to them by producers. Potatoes so bought were resold at a loss (which was borne by the Government, except for a small proportion which, in Great Britain, fell on the Potato Marketing Board) for processing or feeding to livestock.

Beginning with the 1959 crop, a revised scheme was introduced. Under the new arrangements, the Government guarantees to the industry as a whole an average minimum return per ton related to the quantity of potatoes to be used for human consumption only. Each year, the average price per ton received by the producer from sales is assessed and compared with the guaranteed price. The total payment from Exchequer funds equals the difference between the two prices (the market price and the guaranteed price) multiplied by the quantity of home-produced potatoes actually sold for human consumption. One part of the payment goes to the Potato Marketing Board for the benefit of producers in Great Britain, the other to the Ministry of Agriculture for Northern Ireland (where there is no board) for the benefit of producers there.

Sugar Beet. Under the Sugar Act, 1956, and the Agriculture Act, 1957, the British Sugar Corporation contracts to buy the whole of the sugar beet crop (normally some 4 to 5 million tons) produced from a specified acreage (at present 414,600 acres) at a scale of fixed prices, determined as a result of the annual review and related to sugar content.

Any deficit arising from the corporation's transactions is made good by the Sugar Board; any surplus accrues to the board. The main functions of the Sugar Board, set up under the Sugar Act, 1956, are to buy Commonwealth sugar under the

Commonwealth Sugar Agreement and sell it commercially, and to control imports under the International Sugar Agreement.

Cost of Agricultural Support

In addition to providing financial stability by means of price guarantees to farmers, the State promotes efficiency by various other subsidies and grants for specific operations and farm requisites. The estimated total cost of subsidies and grants for agriculture in 1957-58 and 1958-59 is given in Table 18.

PRODUCTION GRANTS

The following are the principal schemes in operation under which farmers are eligible for the grants and subsidies listed in Table 18.

Fertilisers and Lime

Schemes under the Agriculture (Fertilisers) Act, 1952, provide grants to assist farmers in the purchase of nitrogenous and phosphatic fertilisers. Farmers can also obtain a refund of more than half their costs of liming the land to improve soil fertility.

Crops and Grass

Ploughing grants are available for land that has been continuously under grass for three years, to encourage the maintenance of a high tillage area and the regular ploughing up and extended use of leys.

Farm Drainage and Water Supply Schemes

The State makes substantial contributions towards the cost of land drainage and water supply. In England and Wales, for example, under various Acts, grants for farm drainage may be up to 50 per cent of the approved cost. Farm water supply grants are at the rate of 25 per cent of the approved cost where the connection is to a public main, and 40 per cent where a private source is utilised. Separate legislation provides grants for these services in Scotland and Northern Ireland.

Improvement of Livestock Rearing Land in Upland Areas

The Hill Farming and Livestock Rearing Acts provide for grants for owners and occupiers of livestock rearing land in upland areas who wish to put their farms into sound working order. The Acts also apply to some areas, e.g., Orkney and Caithness, which are not much above sea level. The object is to encourage the breeding and rearing of store cattle and store sheep (i.e. cattle and sheep for further fattening, not for immediate slaughter). Grants are at the rate of 50 per cent of the cost of work done; the amount available in the United Kingdom is £25 million, which can be increased by £2 million if necessary.

Silo Grants

Grants amounting to about half the cost of approved projects, up to a maximum of £250 a farm, are available under the Agriculture (Silo Subsidies) Act, 1956, for constructing and improving silos.

Grants for Crofters

Special schemes of assistance for developing agricultural production on crofts were announced in July 1956. These are the Crofters Agricultural Grants (Scotland) Scheme, 1956, and the Crofters Livestock Purchase Loans (Scotland) Scheme,

TABLE 18
EXCHEQUER EXPENDITURES ON AGRICULTURAL SUPPORT

	£ million	
	1957-58	1958-59
I.— <i>Farming Grants and Subsidies</i>		
General fertilisers subsidy	22.8	26.0
Lime subsidy	10.4	9.2
Grants for ploughing up grassland	10.0	9.3
Field drainage and water supply grants ..	2.9	2.9
Grants for improvement of livestock rearing land	1.4	1.7
Marginal production assistance grants ..	2.4	2.3
Bonus payments under the Tuberculosis (Attested Herds) Scheme	8.0	8.6
Livestock: improvement of breeding ..	0.1	0.1
Calf subsidy	12.9	14.8
Hill sheep and hill cattle	2.9	3.1
Silo subsidy	1.3	1.1
Grants for farm improvements	0.2	3.8
TOTAL I	75.3	82.9
II.— <i>Implementation of Agricultural Price Guarantees</i>		
Cereals:		
Wheat and rye	22.2	19.7
Barley	17.1	23.1
Oats and mixed corn	11.9	9.8
	51.2	52.6
Home produced eggs	45.8	33.8
Fatstock:		
Cattle	34.1	12.5
Sheep	11.7	11.7
Pigs	36.8	21.1
	82.6	45.3
Milk (excluding school and welfare milk) ..	12.9	10.1
Wool	1.5	6.4
Potatoes	6.7	6.9
TOTAL II	200.7	155.1
TOTAL CASH (I AND II) ..	276.0	238.0
Administrative overheads (applicable to I and II above)	4.7	4.7
TOTAL SUBSIDY I AND II ..	280.7	242.7
III.— <i>Trading Subsidies in Implementation of Agri- cultural Guarantees</i>		
Home produced eggs	0.9	—
Potatoes	1.6	—
TOTAL III	2.5	—
IV.— <i>Other Services</i>		
Payment to the Exchequer of Northern Ireland	0.9	0.8
TOTAL COST OF AGRICULTURAL SUPPORT	284.1	243.5

1956, both of which are administered by the Crofters Commission. Under the first scheme, grants ranging up to 85 per cent are available for a wide range of agricultural operations and improvement to land equipment. The second scheme enables loans of from £100 to £500, at an initial interest of 6½ per cent, to be given for the purchase of livestock, to incoming tenants of crofts or to crofters who have enlarged their crofts or their shares in sheep stocks held in common. Other schemes operated by the Department of Agriculture for Scotland provide grants and loans to crofters for erecting and improving houses and farm buildings, and loans to incoming tenants to enable them to take over their crofts.

Assistance Schemes for Small Farmers

Under the Agriculture (Small Farmers) Act, 1959, two schemes for assisting small farmers have been introduced:

- (1) the Small Farmer Scheme, under which grants are paid to small farmers, eligible under its provisions, who carry out an approved three to five year improvement plan to make their farms more profitable. These grants are of two kinds—field husbandry grants for the improvement or renovation of grassland and for related ditching and reclamation work; and a farm business grant, the main purpose of which is to help towards the cost of such things as additional livestock or machinery forming part of the improvement plan. This scheme applies in England and Wales, Northern Ireland and Scotland;
- (2) the Supplementary Scheme, which helps those small farmers for whom improvement plans are not yet practicable, and some small marginal producers who are not eligible for the Small Farmer Scheme. The Supplementary Scheme applies to England and Wales and Northern Ireland where the marginal production schemes are being discontinued. These latter schemes provided financial assistance to farmers to carry out programmes mainly of land improvements and reclamation which could not be met out of farm income because, owing to poor soil or other factors beyond the farmers' control, they had no margin of profit to invest in the improvements. In Scotland, the marginal production schemes are being continued for a further period under existing powers and, in the meantime, a supplementary scheme will not be introduced.

Farm Improvement Scheme

This scheme derives from the Agriculture Act, 1957, and, under it, grants towards the cost of farm improvements and the amalgamation of uneconomic holdings are available for ten years up to a maximum of £50 million. This period may be extended to twelve years and the amount to £55 million, if Parliament approves. The rate of grant for improvements is 33⅓ per cent, and the grants cover the provision and improvement of farm buildings and fixed equipment, the construction of farm roads, the supply of electricity, and certain long-term improvements to land.

Horticulture

A Government plan similar to the Farm Improvement Scheme for assisting the horticultural industry was announced in January 1959. Legislation is to be introduced to provide for grants totalling £7.5 million over a period of five years towards the cost of buildings and equipment necessary for the preparation of fruit, vegetables and flowers for the market; for certain other assistance to smaller

businesses growing horticultural crops in the open; and for grants to reduce the cost of glasshouse produce. The grants will be payable in approved cases to co-operative marketing associations of producers as well as to individual producers.

LOAN FACILITIES

Short-term finance for farmers and landlords is usually provided by the commercial banks and long-term borrowing by the raising of mortgages.

In England and Wales, the main sponsored source of long-term finance for agricultural properties is the *Agricultural Mortgage Corporation Limited*, a company established under the provisions of the Agricultural Credits Acts, 1928 and 1932.

Loans are made on a first mortgage of agricultural land and buildings for an amount which may be up to two-thirds of the valuation of the property. The rate of interest is fixed for the whole term of the loan, which varies from ten to sixty years, although the longer term of thirty to sixty years is the more usual. Repayment is made half-yearly and a loan may not be called up before its full term; in 1944, however, provision was made for non-contractual repayment in approved cases on payment of a redemption fee.

The corporation's funds are derived mainly from the proceeds of various issues of debenture stocks which are subscribed by the public and are repaid by the operation of sinking funds. The corporation's reserves include a guarantee fund for which it receives Exchequer support under the Agricultural Credits Act, 1928, the Agriculture (Miscellaneous Provisions) Act, 1944, and the Agricultural Mortgage Corporation Acts, 1956 and 1958, in the form of interest-free loans up to a total of £5 million. It also receives grants to meet operating deficiencies under the Agriculture (Miscellaneous Provisions) Act, 1944, and the Agriculture Mortgage Corporation Act, 1958. At the end of March 1959, the total amount of outstanding loans on first mortgages was £33.1 million; the security of these loans consisted of first mortgages of agricultural land, with the necessary farmhouses and buildings, valued at £58 million.

Landowners in England and Wales also obtain loans for the purpose of carrying out improvements to agricultural land and buildings in accordance with the Improvement of Lands Acts, 1864 and 1899. The amount of the loan is charged on the land improved, in the form of a terminable rent charge payable half-yearly for a period not exceeding 40 years. This type of improvement loan requires the sanction of the Minister of Agriculture, Fisheries and Food, but the ministry does not itself provide the necessary funds. These loans are provided by the Agricultural Mortgage Corporation and by the *Lands Improvement Company*, an older institution, whose funds are provided privately either by way of general loans or against the assignment of specific rent charges.

In Scotland, loans on favourable terms for agricultural purposes on the security of agricultural land in Scotland are granted by the *Scottish Agricultural Securities Corporation Limited*, which was set up in accordance with the provisions of the Agricultural Credits (Scotland) Act, 1929. Both the corporations at present receive grants from the Treasury towards any deficit in their respective annual profit and loss accounts.

In Northern Ireland, loans are available to farmers for a wide range of purposes from the *Agricultural Loans Fund* set up under the Development Loans Act (Northern Ireland), 1945, and administered by the Northern Ireland Ministry of Agriculture. The fund is financed out of the Consolidated Fund, subject to a statutory limit of £3 million. The bulk of the loans issued are for short-term periods up to five years for such items as agricultural machinery, but in the case

of buildings the period may be extended to thirty years. No loans are advanced for purchase of land. Any deficiency in the income of the fund is financed by the Northern Ireland Parliament.

AGRICULTURAL ADVISORY SERVICES

There are a number of agricultural advisory services which operate under Government auspices.

The National Agricultural Advisory Service

Free technical advice on all agricultural and horticultural matters is available to every farmer and grower in England and Wales through the Ministry of Agriculture's National Agricultural Advisory Service (NAAS).

Every county has a county advisory officer in charge of advisory work and is divided into districts in each of which there is a district advisory officer who can call on an extensive system of specialist advisers. Advisers in livestock husbandry, farm machinery, poultry husbandry, and horticulture are available in each county; at the 12 regional centres and sub-centres there are senior advisers in these subjects and also in crop and grassland husbandry, and milk production, besides specialists in animal nutrition, bacteriology, soil chemistry, plant diseases, and plant pests. These centres are equipped with laboratories for the analysis of soils and feeding-stuffs, and for the diagnosis of crop pests and diseases. The advisers work in close consultation with the ministry's plant pathology laboratory at Harpenden, Hertfordshire.

In Scotland, the advisory services, similar in scope to the NAAS, are based on the three agricultural colleges. Northern Ireland has its own separate advisory service which is closely linked with the research and experimental divisions.

Facilities are provided at the NAAS experimental farms and horticultural stations in England and Wales and at agricultural college centres in Scotland for field-scale extensions of research work and investigations of local problems. Experiments are also carried out at regional advisory centres and on commercial farms.

Agricultural Improvement Councils

The *Agricultural Improvement Council* (AIC) for England and Wales and the *Scottish Agricultural Improvement Council* advise the agricultural departments on the application of the results of scientific investigation to farming practice and on problems requiring investigation. The AIC is also concerned with the problems of estate management, including buildings and fixed equipment.

The Agricultural Land Service

The main functions of this service, which operates in England and Wales, are:

- (1) to advise owners of agricultural land, whether landlords or owner-occupiers, on estate management matters, including farm buildings and other fixed equipment;
- (2) to provide professional advice and services to the Minister of Agriculture, Fisheries and Food, the Agricultural Land Commission and County Agricultural Executive Committees on all matters relating to agricultural land, including: the purchase and sale of land by the minister; the management of land owned by or in the possession of the minister; the provision of grant-aid under the Hill Farming and Livestock Rearing Acts and of marginal production assistance; and the provision and management of smallholdings and allotments by local authorities; and

- (3) to advise the minister and local planning authorities on the agricultural aspects of planning and the release of agricultural land for other development, including afforestation.

In Scotland, similar duties are carried out by officers of the Department of Agriculture.

Veterinary Services

There is a comprehensive State Veterinary Service which, in Great Britain, is administered by the Animal Health Division of the Ministry of Agriculture, Fisheries and Food and the Department of Agriculture for Scotland, and in Northern Ireland by the Northern Ireland Ministry of Agriculture. It consists of a field staff, research workers, and an investigation service which acts as a link between the field staff, veterinary surgeons in private practice and the research laboratories. The investigation service in Scotland is linked with agricultural teaching institutions and is not part of the Government service.

RESEARCH AND EDUCATION

Agricultural research in Britain is planned and co-ordinated by the Agricultural Research Council and is largely financed by the State. (The composition and functions of the council are described on pp. 210-11.) The council has 23 research stations and units under its direct control and is responsible for the administration of Government grants to 14 independent research institutes in England and Wales; in Scotland, 8 independent research organisations receive grants through the Department of Agriculture for Scotland. The Ministry of Agriculture, Fisheries and Food and the Department of Agriculture for Scotland also have their own research laboratories (see p. 214). Grants are also made by the Agricultural Research Council to universities and to other recognised research institutions.

Many of the independent research organisations have achieved an international reputation for their contributions to agricultural progress. The Rothamsted Experimental Station at Harpenden, Hertfordshire, founded in 1843, was the first such institute in the world and is still a leading authority for research on soils, fertilisers and crop husbandry. Others of outstanding importance include the Macaulay Institute for Soil Research, Aberdeen; the Rowett Research Institute, Aberdeen, which specialises in the study of animal nutrition; the Research Institute at Pirbright, Surrey, for animal virus diseases; the East Malling Research Station, in Kent, and the Long Ashton Research Station, Bristol University, for fruit research; the John Innes Horticultural Institution, Bayfordbury, Hertfordshire; and the National Institute for Research in Dairying, Reading, Berkshire.

Information on research is exchanged with other Commonwealth countries through the machinery of the Commonwealth Agricultural Bureaux and Institutes (ten Bureaux and two Institutes in the United Kingdom and one Institute in Canada).

In England and Wales, research and advice are combined in the Provincial Agricultural Economics Service, attached to the universities and organised in ten economic advisory centres. In Scotland, agricultural economists are on the staff of the three agricultural colleges, and the Department of Agriculture has an economics and statistics unit.

The Northern Ireland Ministry of Agriculture, which also has its Farm Economics Branch, has, in addition, its own research divisions investigating problems of animal and crop production. The research divisions work in close touch with the ministry's county advisory staffs and with the Queen's University of Belfast, and

also provide technical advisory services for the farmer. The Plant Disease Division controls the disinfection of all flax seed sown in Northern Ireland, and the Dairy Bacteriology Division maintains the hygienic standards laid down for the production and handling of milk. At Hillsborough, in County Down, the Northern Ireland Agricultural Research Institute owns and operates a farm of some 500 acres. The institute is endowed from public funds, and the officers of the ministry's research divisions are afforded facilities for carrying out their field experiments. The Ministry of Agriculture maintains a horticultural centre at Loughgall, County Armagh, at which problems of special interest to Northern Ireland are investigated.

Industrial concerns manufacturing such products as weed-killers, insecticides, fertilisers and feedingstuffs undertake research on a considerable scale and have been responsible for developing new and improved products in their particular spheres. There are also other non-governmental research establishments, such as the Nuffield Foundation's 'working laboratory' at Great Leigh Farm, Teign Valley, Devonshire.

There are three types of institutions which provide full-time training in agricultural subjects—universities, agricultural colleges and, in England and Wales, county farm institutes. Eight universities in England and Wales (Cambridge, Durham, Leeds, London, Nottingham, Oxford, Reading, and the University of Wales), and three in Scotland (Edinburgh, Glasgow, and Aberdeen) provide degree courses in agriculture, which are of particular value for intending research workers, advisory officers, teachers and other specialists. The University of Bristol offers postgraduate diploma courses. In Northern Ireland, a degree course is provided at Queen's University, Belfast. A National College of Agricultural Engineering is to be built next to the National Institute of Agricultural Engineering at Silsoe, Bedfordshire. This will be the eighth of the national colleges (see p. 170) established to train people for highly specialised industries whose needs cannot be met at local technical colleges.

Two-year diploma courses are given at five agricultural colleges and at two of the county farm institutes in England and Wales (see below); three agricultural colleges in Scotland give two-year to three-year diploma courses. These are intended mainly for farmers and farm managers, and are a preparation for the national diplomas in agriculture, dairying, horticulture, poultry husbandry and agricultural engineering. In Northern Ireland, there are three agricultural colleges.

There are 32 county farm institutes in England and 5 in Wales run by local education authorities. They provide residential courses in general agriculture, dairying, horticulture and poultry husbandry. These courses, which are usually for one year of about 36 working weeks, are designed for those wishing to become skilled workers in the industry. Local education authorities also provide a wide range of short courses and classes for farmers, farmworkers, horticulturists and domestic producers.

An important means of voluntary informal education in agriculture is provided by *Young Farmers' Clubs*, which flourish in villages and towns throughout the United Kingdom. There are over 1,800 clubs in Britain with well over 70,000 members, mostly under the age of 25. Each club is self-governing but has the support of an advisory committee of farmers and other adults. Clubs are combined in county federations and in National Federations for England and Wales (founded in 1932), Scotland (in 1938), and Northern Ireland (in 1929).

Government assistance is given to develop rural crafts and industries. *The Development Commission*, a non-departmental organisation consisting of eight commissioners appointed by the Crown, was set up under the Development and Road Improvement Fund Acts of 1909 and 1910 to advise the Treasury on advances

from the Development Fund. The purposes of this fund are now mainly the development of rural industries and amenities in the countryside and the development and improvement of fisheries, including the promotion of marine and freshwater research. In England and Wales, the main agencies for the development of rural industries are the *Rural Community Councils*, organised on a county basis, with their Rural Industries Committees, the *Rural Industries Bureau*, founded in 1921, and the *Rural Industries Loan Fund, Ltd.*, started in 1940. On the recommendation of the Rural Community Councils, the Rural Industries Bureau provides technical advice and instruction to craftsmen and small rural businesses; and loans from the Loan Fund for the acquisition of equipment and the purchase or improvement of workshops are available.

In Scotland, the body corresponding to the Rural Industries Bureau is the *Scottish Country Industries Development Trust*, founded in 1935, which, in the absence of Rural Community Councils, exercises local and national responsibilities for the development of rural industries.

Since the Government of Ireland Act, 1920, schemes in Northern Ireland are no longer eligible for grants from the Development Fund.

A *Museum of English Rural Life* was established by the University of Reading in 1951 as a national centre for the study of material connected with the history of the countryside. It was opened to the public in April 1955.

A large number of agricultural shows held annually throughout Britain focus attention on modern farming methods and equipment. The chief ones are the Royal Show, held since 1839 by the Royal Agricultural Society of England; the Bath and West Show, held since 1780 by the Bath and West and Southern Counties Agricultural Society; the Royal Highland Show, held since 1822 by the Royal Highland and Agricultural Society of Scotland; the Royal Ulster Show, held by the Royal Ulster Agricultural Society; and the Royal Welsh Show, held by the Royal Welsh Agricultural Society. The Smithfield Show and Agricultural Machinery Exhibition, held annually in London, which was originally concerned only with livestock, has now become, in addition, the largest agricultural machinery exhibition in Britain.

FISHERIES

Britain's sea fishing industry falls into two main divisions, concerned respectively with white fish and herring. White fish, such as cod, haddock, plaice, turbot and sole are demersal fish which live on or near the sea-bed. Herring and similar species, such as pilchard, mackerel and sprats, are pelagic fish which live in intermediate waters or near the surface.

The white fish section of the industry is made up of three distinct groups: the distant water, the near and middle water, and the inshore fisheries. The distant waters are those off Iceland, Greenland and the north coast of Norway, and the Barents Sea; the middle water grounds lie around the Faroe Islands; and the near water grounds are those in the North Sea, the Irish Sea and in the coastal areas around Britain. The herring fishing grounds are mainly within 60 miles of land. The inshore waters also yield considerable quantities of shell fish.

These fishing grounds—other than British coastal waters—are regarded by the United Kingdom as being high seas, and therefore open to ships of any nation; but in recent years this has been disputed by the States off whose territories they lie. Territorial waters, in the United Kingdom view, following a widely but not universally recognised rule of international law, extend only 3 miles from low water mark. The United Kingdom does not recognise the validity of unilateral actions seeking to extend territorial waters, but has, for example, at the Geneva

Conference of 1958 on the Law of the Sea, made proposals for a general extension of territorial waters to meet the views of countries claiming wider limits.

Fishing Ports

The principal fishing ports in England and Wales are Hull, Grimsby, Fleetwood, Milford Haven and Lowestoft for white fish, and Great Yarmouth and Lowestoft for herring; in Scotland, the chief centres for white fish are Aberdeen, Leith, Fraserburgh, the Moray Firth ports, Shetland, the west coast and the Clyde, and for herring they are Fraserburgh, Peterhead, Aberdeen, Shetland, and Stornoway, as well as the west coast and the Clyde; those in Northern Ireland are Ardglass, Portavogie and Kilkeel.

Methods of Sea Fishing

The chief methods of catching fish are by trawling, seining, lining, and ring and drift netting. In trawling, a funnel-shaped net of heavy twine is towed along the sea bed. In seining, a funnel-shaped net with long wings is slowly hauled towards the vessel, the long manila warps driving the fish into the path of the net. In lining, long lines are made up with baited hooks at regular intervals and are laid over a considerable area; deep sea lining can be carried out on grounds too rough for trawling, as well as on smooth grounds. A limited number of Scottish vessels are engaged in this fishery. Lining also provides employment, in autumn, winter and early spring, for a large number of inshore fishermen fishing for cod, whiting and haddock. Ring netting, mainly used by Scottish fishermen, is an efficient method of encircling shoals of pelagic fish, such as herring or pilchard. In drift net fishing, a number of finely meshed nets, attached to each other, form a vertical curtain of netting so that fish swimming against them are caught by the gills. The vessel drifts with the wind and tide for a few hours, usually starting at dusk, before hauling.

Trawling is carried out in the distant, near and middle waters for all species of demersal fish throughout the year. Seining is also dependent upon demersal fish and is operated all the year round. An increasing number of English, Scottish and Northern Irish vessels depend on seining for a living, the main areas of operation being in the North Sea, the Minches, the Firth of Clyde, and the Irish Sea. There are about 800 Scottish and Northern Irish seiners, and about 200 operate from English ports.

The pelagic fisheries are seasonal. There is a summer fishery for herring based on the Shetlands, the east coast ports of Scotland, and the north-east coast ports of England, and an autumn fishery off East Anglia based on Lowestoft and Yarmouth. Other seasonal fisheries take place off the west coast of Scotland and off Southern Ireland. The inshore fisheries comprise a great diversity of types of vessels and methods of capture; trawling, seining, lining, and drift and ring net fishing are employed; in addition, there are extensive fisheries for crabs, lobsters, prawns, cockles and oysters, and, off Scotland and Northern Ireland, there is a fishery for 'Norway lobsters' (nephrops).

The Fishing Fleet

Distant water vessels, which operate mainly from Hull, Grimsby and Fleetwood, numbered 248 at the end of 1958. They are over 140 feet and up to 195 feet in length and make voyages of 17 to 23 days to fishing grounds in the Arctic Circle. At the same date, near water vessels numbered 516; they are under 130 feet long and work near home, making voyages of three to ten days. Middle water vessels numbered 63; they are 110 to 140 feet in length and undertake voyages of about two weeks. Included in the near water group are vessels engaged in drift net fishing,

which usually make daily voyages. The inshore group consists mainly of vessels of under 70 feet which are seldom at sea for longer than two or three days and more usually make daily landings, often fishing within sight of land.

In the United Kingdom fishing industry in 1958 there were about 24,000 fishermen in regular employment and some 3,300 were occasionally employed; 10,258 of the former and 1,261 of the latter were from Scottish ports. In Northern Ireland there were 400 regular fishermen.

Supplies

In the year ended 31st December, 1958, landings of fish, both demersal and pelagic, in the United Kingdom by British fishing vessels totalled 866,000 tons (741,000 tons of demersal fish and 125,000 tons of pelagic), valued at about £50.3 million. Landings at British ports by foreign vessels totalled about 91,000 tons of fresh and frozen fish (including 35,000 tons brought direct from the fishing grounds), valued at about £8 million. British landings of shellfish yielded £1.79 million. Cod accounted for 40 per cent of the total value of wet fish (i.e. fish other than shellfish) landed by British vessels; haddock (18 per cent) and plaice (9 per cent) were the other most important sources of earnings to the industry.

Net imports of all types of fish (fresh, frozen, salted or canned) into the United Kingdom in 1958 amounted to about 183,000 tons valued at over £48 million, including 43,000 tons of canned salmon to the value of £25 million and other canned fish worth £9.5 million.

Weekly consumption of fresh, frozen and cured fish (excluding shellfish and imported canned fish) in the United Kingdom averaged 16,300 tons landed weight in 1958. On an edible (fillet) weight basis, United Kingdom consumption has been estimated provisionally at 18.8 pounds per head in 1958, compared with 28.7 pounds in 1948 and an annual average of 21.8 pounds from 1934-38.

Northern Ireland consumes about one-third of the catch landed there by British vessels (9,500 tons in 1958) and exports the rest to Great Britain.

Sea Fish Processing

Processing and packaging of fish—curing, kippering, canning and quick-freezing for consumer packs—are the subject of continuing research and development. For example, the production of quick-frozen fish increased fivefold between 1952 and 1958. With the increase in quick-freezing, new export outlets have opened up for white fish, which accounted for about £3.3 million of the total British exports of fish and fish products, valued at £5.9 million in 1958. Markets abroad for quick-frozen fish, mainly in Europe and the Commonwealth, have continued to expand, but exports of herrings, for which Eastern Europe and the Soviet Union have been large customers, have declined, because of the fall in total catches.

By-products

A valuable by-product of the industry is the manufacture of fish meal for animal food and to a much lesser extent for fertilisers. Home production of white fish meal and herring meal in 1958 fell to 77,000 tons (from 79,700 tons); a large percentage of the fish meal is obtained from offal and most of the remainder from unsold catches. Imports of fish meal of all kinds in 1958 totalled 113,000 tons. The preparation of vitamin oils from fish livers is also a source of additional earnings. The oil is extracted at sea as soon as the fish are caught, and is later refined ashore.

Freshwater Fisheries

The main commercial freshwater catches are salmon, sea-trout and eels. In Scotland and Northern Ireland, fixed nets along the coast and sweep or draught

nets in rivers and estuaries are used; in England, drift nets are used for catching salmon in the sea, and draught nets and fixed traps in estuaries. In England and Wales, the value of the salmon catch is approximately £350,000 a year, in Scotland it amounts to about £1 million, and in Northern Ireland to some £200,000. In Northern Ireland, eels worth £100,000 a year are captured by long lines and by eel nets placed in river weirs.

Fishing for sport by rod and line in rivers, lakes, streams and canals is widespread. Salmon, grilse and sea-trout are the most important catches, and the fishing rights command high rentals. There are also extensive fishings for brown trout and other freshwater fish, e.g., roach, rudd, perch and dace; figures of catches are not available.

Distribution System

The principal inland wholesale distributing centre for fish is Billingsgate Market in London, which handles about 400 tons a day, but other large cities also have central fish markets. The principal method of distribution is through wholesalers, located at the ports, who buy at the auctions and sell to inland wholesalers; the port wholesalers prepare the fish for onward shipment. Some sixty special express fish trains transport the catch daily from the ports to inland centres, but increasing use is being made of road transport. Retail sales are handled by some 15,000 fishmongers and nearly 15,000 fish friers; the latter use about a third of the landings of white fish.

Recent developments include the entry of trawler-owning companies into the system of distribution. This process is being speeded by two factors. One is the growing popularity of quick-frozen consumer packs, which are sold by other retail outlets as well as by fishmongers (9 per cent of fish sold in 1958 was estimated to be quick-frozen). The other is the decline, from about 25,000 in 1950, in the number of fried fish shops.

Promotion and Regulation of the Industry

Laws in Britain relating to fisheries and fish are principally directed to the following purposes: (1) protection of supply by measures against over-fishing, e.g., the Sea Fisheries Regulation Act, 1888, the Sea-Fishing Industry Act, 1933, and the Sea Fish Industry Act, 1938; (2) promotion of the prosperity of the industry, e.g., the Herring Industry Acts, 1935 to 1957, the White Fish Industry Acts, 1951 to 1957, and the Fisheries Act, 1955; (3) protection of the quality of the product, e.g., the Food and Drugs Act, 1955. The Government departments mainly responsible for the administration of laws in the first two categories and for the development of every branch of the fishing industry are the Ministry of Agriculture, Fisheries and Food, the Scottish Home Department, and the Ministry of Commerce for Northern Ireland; the Ministry of Health and the Department of Health for Scotland are concerned with questions of nutrition and hygiene affecting fish and fish products. The safety and welfare of crews of fishing vessels are provided for under the Merchant Shipping Acts, which are administered by the Ministry of Transport and Civil Aviation.

The authorities concerned with fisheries research are the Ministry of Agriculture, Fisheries and Food, the Scottish Home Department, the Northern Ireland Ministry of Commerce, the White Fish Authority, the Herring Industry Board, and the Development Commissioners; and, on food investigation, the Department of Scientific and Industrial Research.

A Committee of Inquiry into the Fishing Industry was appointed in November, 1957, to assess, in relation to developments in fishing and the marketing of fish, the size and pattern of an economic fishing industry in the United Kingdom.

The Herring Industry Board

The Herring Industry Board was set up under the Herring Industry Act of 1935 to reorganise, develop and regulate the herring industry; subsequent amending Acts have also been passed. The board consists of a chairman and two other members, all part-time and independent of the industry, who are appointed jointly by the Minister of Agriculture, Fisheries and Food, the Secretary of State for Scotland and the Home Secretary. The board, whose activities are financed partly by Government grants and loans and partly by levies and licence fees, is advised by the *Herring Industry Advisory Council*, consisting of representatives of the catching and shore sections of the industry.

The functions of the board include the promotion of sales of herring, both at home and abroad, and the provision of grants and loans for the purchasing of new boats, nets and gear, and the reconditioning of existing boats. The board is particularly active in developing new and wider markets for herring, and applying the benefits of technical progress to the industry, including the adoption of new fishing methods, and the construction of new processing plants for quick-freezing and kippering. The board buys all herring not sold for other purposes for reduction to oil and meal, and, with the aid of Government grants, has built a number of processing factories for this purpose.

A Government subsidy has been paid to herring fishermen since May 1957; in the year ended 31st March, 1959, £383,000 was made available.

The White Fish Authority

The White Fish Authority was set up under the Sea Fish Industry Act, 1951, to reorganise, develop and regulate the white fish industry. It is composed of five independent members, appointed jointly by the Minister of Agriculture, Fisheries and Food, the Secretary of State for Scotland and the Home Secretary, and works in consultation with the industry and consumers through the *White Fish Industry Advisory Council*. The authority's activities are financed partly by Government grants and loans and partly by a levy on first-hand sales and by registration fees.

The White Fish Authority has powers similar to those of the Herring Board; it makes loans and grants for the purchase of new vessels and engines and for the conversion of coal-using vessels to the use of oil, including diesel oil, and it makes loans for the reconditioning of old vessels to further the modernisation of the fishing fleet. Up to 31st March, 1959, nearly £18 million in loans and nearly £6·8 million in grants were approved for this purpose by the authority.

Since 1950, a subsidy from public funds has been paid to near and middle water vessels and to inshore vessels engaged in the white fish industry in the United Kingdom. In 1958-59, £2·64 million was made available; a large proportion of this sum was used to assist steam vessels.

International Fisheries Conservation Convention

A new Fisheries Conservation Convention, covering the north-east Atlantic, was signed in London in January 1959. The United Kingdom is among the signatories. The convention which, on ratification, will replace the one at present in force, which is more limited in scope, will make possible further measures for conserving fish stocks throughout the north-east Atlantic Ocean and its dependent seas (excluding the Baltic).

Whaling

Whaling is mainly conducted by expeditions, each consisting of a large floating factory ship accompanied by its attendant whale catchers and tankers, which operate mainly in the Antarctic Ocean. It is regulated by the *International Whaling*

Commission, set up under the International Whaling Convention of 1946, which controls the dates of the season and sets a limit on the Antarctic catch of whales. The offices of the commission are in London.

The United Kingdom industry ranks third in size after those of Norway and Japan; it sends three expeditions to the Antarctic each year. In addition, whaling is also undertaken from land stations on South Georgia, a British island in the South Atlantic. The volume of whale oil obtained by the British expeditions in the 1958-59 season amounted to about 295,000 barrels.

FORESTRY

The total woodland area of Great Britain is just over 4 million acres, or about 7 per cent of the total land area. Timber and its products are of great importance to the economy of the country, and large quantities of industrial timber (i.e. wood other than that used for domestic fuel) are needed to meet all demands; but, except for the period of the second world war when, of necessity, much over-felling took place, home woodlands have not been in a position to make more than a small contribution to the nation's timber requirements. At present, Great Britain imports about 85 per cent of her needs of timber and wood products. The Government is, however, devoting continuous effort through the Forestry Commission to the long-term task of increasing the country's timber resources.

Forest Areas

At 30th September, 1957, the area of woodland in blocks of one acre and over in extent was estimated to be 4,011,000 acres of which 52 per cent lay in England, 37 per cent in Scotland and 11 per cent in Wales. The greatest density of woodland in Great Britain occurs in the north and east of Scotland and in the southern counties of England, although afforestation is now increasing the importance of forestry in many counties which were not previously heavily wooded. The classification of forest area showing type and ownership in 1957 is given in Table 19.

TABLE 19
CLASSIFICATION OF FOREST AREA IN GREAT BRITAIN (1957)

Thousands of acres

Forest Type	Forestry Com- mission woodlands	Private woodlands (a)	Total	Percentage of total forest area
Mainly coniferous high forest ..	996	576	1,572	39
Mainly broadleaved high forest ..	125	761	886	22
Coppice and coppice with standards	29	307	336	8
Unproductive woodlands	101	1,116	1,217	31
TOTALS	1,251	2,760	4,011	100
Percentage of total forest area ..	31	69	100	

Source: Forestry Commission.

(a) Forest owned by private individuals and bodies; in this classification a small area of communal forest is included, i.e. forest owned by public bodies such as local authorities and water supply undertakings.

The high proportion of unproductive woodland, i.e. scrub and areas where trees have been felled and partially felled, is largely a legacy of two wars when many woods were felled to meet home demands for timber. During the past ten years the area of this unproductive category has been reduced by about 150,000 acres, but the large area which remains gives some indication of the problem of rehabilitation which still lies ahead.

The most common of the coniferous tree species in Great Britain is probably the Scots pine, but such trees as the Sitka and Norway spruce are also plentiful. Of the broadleaved species, the most common tree is the oak, and there are considerable numbers of beech, ash, birch, sycamore and elm.

Volume of Timber

At 30th September, 1957, the volume of standing timber in woodlands in Great Britain, including that in hedgerows and in woods of less than one acre in extent, was estimated to be 3,500 million hoppus feet.¹ This consisted of 1,350 million hoppus feet of softwood (derived from coniferous species) and 2,150 million hoppus feet of hardwood (derived from broadleaved species). The net annual increment (the year's growth minus losses due to fire, decay or similar causes) was about 115 million hoppus feet. The climate and soil of Great Britain are favourable to the growth of timber; the annual rate of growth which can be obtained in Great Britain under systematic management compares most favourably with that achieved in other European countries.

Forest Policy

From the early Middle Ages there was a continuous process of deforestation in Great Britain. Woodlands were cleared for agriculture, and timber was used for a variety of domestic and industrial purposes, for instance, as charcoal in iron-smelting, for fuel, housebuilding, domestic and agricultural equipment, and ship-building. Occasionally, from the sixteenth century onwards, Governments encouraged the planting of high forest as an insurance against the blockade of war, but in times of normal trading it was the practice to buy timber from abroad. Following the Industrial Revolution, cheap and easily workable timber began to be required in ever-increasing amounts for a variety of new industrial uses. Home woodlands contained neither the types nor the quantities of timber to meet this demand and the importation of timber, principally of softwoods, expanded greatly. By 1914 the trade in imported timber had grown, and the contribution from home woodlands had shrunk, to a point where no more than 7 per cent of the country's total requirements were being met from home sources. The sudden demands of the first world war, however, brought about a realisation of the need for a national forest policy. The Forestry Commission (see p. 296) was established under the Forestry Act, 1919, to give effect to such a policy, but, although some progress was made, the devastation of the country's woodlands caused by extensive felling during the second world war showed clearly that larger scale measures were needed.

In 1943, the Forestry Commissioners recommended, in their report on post-war forest policy, that the nation should aim at having at least 5 million acres of productive forest, of which 2 million acres, mostly in private ownership, would accrue from the rehabilitation of existing woodlands and 3 million acres would be obtained by the afforestation of bare land by the Forestry Commission. The acreage of woodland proposed would, it was estimated, produce ultimately a volume of

¹ The measure for standing timber: the square of the quarter-girth of timber (in inches) multiplied by the length (in feet) and divided by 144 gives the measure of volume in hoppus feet.

timber equivalent to about one-third of the country's needs. On this basis, forestry would become a major industry which, in addition to its economic value, would help to arrest the depopulation of rural areas.

In July 1958, the Government announced its conclusion, reached after a review of forestry policy, that the planting programmes of the Forestry Commission should be fixed for periods of ten years at a time. For the five-year period 1959 to 1963 the programme would be about 300,000 acres. For the period 1964 to 1968 the planting programme would be reduced to about 235,000 acres, when the Forestry Commission's existing plantations would begin to come into full production. The size of the subsequent programme is to be reviewed in 1963. In deciding where planting shall take place, special attention is to be paid to the upland areas, particularly in the Highlands of Scotland and in Wales, where expansion of forestry would provide, among other benefits, new opportunities for employment.

Future developments are likely to include the encouragement of still greater integration of forestry and agriculture in the marginal hill areas. A recommendation to this effect was made in the Report on Forestry, Agriculture and Marginal Land, by the Natural Resources (Technical) Committee, published in March 1957. As an example of such integration, the committee cites among others the 'Strathoykell' scheme which is proceeding in adjoining sheep farming areas in Ross-shire and Sutherlandshire in Scotland. In this area a substantial acreage has been planted by the Forestry Commission, houses have been built, grant-aided farm improvements have been made, and stocks of sheep and cattle have been increased.

The Forestry Commission

The Forestry Commission was established in 1919 as the national forest authority; it has the general duty of promoting the interests of forestry, the development of afforestation and the production and supply of timber in the United Kingdom. The commission consists of a chairman and not more than nine commissioners who are appointed by the Crown; in exercising their functions, they are required to comply with such directions as may be given to them by the Minister of Agriculture, Fisheries and Food and the Secretary of State for Scotland. The Forestry Act, 1951, placed responsibility for the maintenance of an adequate reserve of growing trees in Great Britain on the Forestry Commissioners and gave them powers to regulate the felling of trees by the issue of licences. Besides conducting its own forest operations, the commission represents the interests of British forestry at inter-governmental meetings, gives encouragement to private forestry and performs a wide range of general forestry duties such as research and education and the publication of technical and other literature on forestry. In the administration of its duties in relation to private forestry there is continual contact between the commission's staff and private land-owners, and the staff gives advice, free of charge, on silvicultural and management problems; substantial grants for planting and other forestry activities are paid to woodland owners (see pp. 297-8). The commission has also played an important part in encouraging the establishment of new timber-using industries.

During the years 1919-58¹, the Forestry Commission acquired land through the Forestry Fund (see p. 297), under the Forestry (Transfer of Woods) Act, 1923, and by gifts which, after taking account of disposals, totalled 2,361,300 acres. This total comprises 1,498,400 acres classified as 'forest land', of which 1 million acres had been planted by 1956 and the rest would be planted in due course, and 863,000 acres of 'other land' which includes forest nurseries, rough grazing, agricultural land and land unsuitable for planting, such as the tops of mountains. The total

¹ To the end of the Forest Year 1958 (30th September).

number of commission forests in Great Britain at 30th September, 1958, was 508, of which 222 were in England, 210 in Scotland and 76 in Wales. In 1954, the peak year, the area planted was 70,400 acres; it decreased to 52,400 acres in 1958, owing to the continuing difficulty of acquiring sufficient plantable land.

Nearly half of the Forestry Commission's new planting is being carried out in Scotland, about a quarter of it in the Highland counties. The poorer types of land are being used, such as sour, peaty soil which is unsuitable for other agricultural purposes, and has become suitable for forestry only as a result of recent advances in deep ploughing. Sand dunes are also used; on the southern shore of the Moray Firth, Culbin Forest now covers 7,700 acres of land which had been unproductive for centuries. Similarly, in Wales, 1,900 acres of sand dunes at Newborough, Anglesey, and nearly 2,400 acres at Pembrey, Carmarthenshire, are being successfully planted. In several forests, complete new villages are being built to re-house forestry workers.

All the commission's forests are covered by management plans, which provide for such work as planting, road construction, thinning and fire protection. Since 1956, the commission has employed and trained game wardens to protect young trees against deer, rabbits, voles and other wild animals. Besides these and other forest officers, the commission employs two groups of specialist officers, estate officers and engineers. During the years 1950-58, the engineers constructed some 3,000 miles of new roads, and the estate officers were responsible for the building of over 2,000 new houses.

Finance

The Forestry Fund was established by the Forestry Act, 1919; from it is paid all the expenditure of the Forestry Commissioners and into it are paid their receipts from sales of produce, rentals and other sources, together with the amounts voted annually by Parliament. From 1920 to 1958, parliamentary grants totalled £97·5 million and receipts from other sources £32 million. Expenditure during these years totalled £130 million. Actual expenditure during the year ended 30th September, 1958, totalled £10·25 million, of which £864,000 represented various grants to private forestry.

Private Forestry

Privately owned woods in 1957 comprised 69 per cent of the total forest area in Great Britain (as shown in Table 19, p. 294), and contain most of the mature and semi-mature timber. The size of woodlands in individual ownership ranges from a few acres to several thousand acres, and a high proportion of the privately owned woodland area belongs to small owners (i.e. owners of woods of up to about 250 acres).

Impetus has been given to the effective management of private woodlands by the introduction, under the Forestry Act, 1947, of the Dedication of Woodlands Scheme. Under this scheme, owners are invited to put their land permanently to timber production and to manage their woods in accordance with a plan agreed with the Forestry Commission, in return for the provision of planting and management grants and technical assistance. By September 1958 the total area dedicated was 540,418 acres. The owners are to be represented, in their relations with the Forestry Commission, by a Woodland Owners' Association now being formed in accordance with the recommendation of the Committee on the Marketing of Woodland Produce in its report issued in 1956. In addition, there are the woodlands covered by the Approved Woodlands Scheme in which a planting grant, but no management grant, is made; and these bring the total area managed under

an agreed plan to over 690,200 acres. This does not take into account other estates that are already working to a plan but have not been put forward for inclusion in either scheme.

The Forestry Commissioners have encouraged the development of co-operative forestry schemes and have made loans available. The co-operative societies provide for landowners and farmers the services of skilled staff, centralised purchasing facilities, and a central agency for the disposal of forest produce. The whole of Scotland, a number of areas in Wales and several districts in England are now served by such societies. The commission also co-operates with the principal forestry societies, such as the Royal Forestry Society of England and Wales and the Royal Scottish Forestry Society, in spreading technical knowledge. In 1948, the United Kingdom Forestry Committee was formed, bringing together representatives of the Country Landowners' Association, the Scottish Landowners' Federation and the two Royal Forestry Societies, with additional members possessing experience of land agency, forest economics and timber trade. This committee has been accepted in forestry negotiations as the body which represents the collective interests of owners of private woodlands.

The total area estimated to have been planted annually by private owners has risen from 9,000 acres in 1947 to 32,100 acres in 1958; this compares with a pre-war average of 6,000 to 7,000 acres.

Consultative Machinery

The Forestry Act, 1945, established national committees for England, Scotland and Wales, composed partly of forestry commissioners and partly of persons outside the commission. These committees, working directly under the authority of the commissioners, supervise certain aspects of the commission's work, including particularly the acquisition and management of land and the promotion of private forestry; in the latter task they are required to maintain direct contact with the regional advisory committees which have been set up in each of the commission's conservancies with the purpose of providing a link with all those in the conservancy who are interested in forestry. On all proposals for acquisition of land, the commission consults the Ministry of Agriculture, Fisheries and Food and the Department of Agriculture for Scotland.

Other bodies have been set up to provide for consultation on the marketing and utilisation of home grown timber.

The Home Grown Timber Advisory Committee, established by the Forestry Commissioners in 1939, consists of representatives of the Forestry Commission, the Board of Trade and associations of landowners and timber merchants; it meets quarterly to discuss various matters affecting the marketing of home grown timber. In 1949, the Forestry Commissioners set up the Advisory Committee on Utilisation of Home Grown Timber to advise landowners and to undertake research into problems connected with the marketing of timber from the commission's own forests. Among the members of this committee are representatives of the Forest Products Research Laboratory (see p. 299), the Rural Industries Bureau (see p. 289) and the Timber Development Association.

Forestry Education and Research

The Forestry Commission maintains four forester training schools: in England, at Parkend in the Forest of Dean, Gloucestershire; in Wales, near Bettws-y-Coed in Caernarvonshire; and in Scotland at Benmore, Argyllshire, and Faskally, near Pitlochry in Perthshire. Northerwood House in the New Forest, Hampshire, is the commission's educational centre, and is used for practical courses for university

students, landowners and agents, planning officers, school teachers and others connected with, or interested in, forestry.

Higher education in forestry is provided at several universities; a proportion of suitable graduates is recruited by the commission as forest officers.

The commission's forest research station at Alice Holt Lodge, near Farnham, Surrey, was opened in 1946. Expenditure on research work at this station and in experimental areas in many forests in Great Britain amounted to £306,000 in 1958. The commission makes grants for special forestry research work to various institutions and to university departments including the Imperial Forestry Institute at Oxford, which is also financed by the University, the Colonial Office, and Colonial Governments. Research into the qualities of home grown timber is carried out by the Forest Products Research Laboratory at Princes Risborough, which is one of the establishments of the Department of Scientific and Industrial Research, and also by grant-aided research associations.

The Forestry Commission has played a leading part in the Commonwealth Forestry Conference, since its first meeting in 1920; the seventh meeting was held in Australia and New Zealand in 1957. The commission is also closely associated with the work of the International Union of Forest Research Organisations, whose twelfth congress was held at Oxford in 1956.

Forestry in Northern Ireland

When the Government of Northern Ireland was formed in 1922, the new Ministry of Agriculture became the forest authority working with similar powers and duties to those conferred on the Forestry Commission by the Forestry Act, 1919. At that time the ministry took over some 4,000 acres for afforestation, of which 700 acres had been planted.

Forest policy in Northern Ireland is now implemented by the Forestry Act (Northern Ireland), 1953, which replaced earlier legislation. This Act provides the ministry with powers to acquire and manage land, and to give financial and technical assistance for private planting. It introduced measures for the protection of all woodlands, whether owned by the State or privately owned, against destruction by over-cutting, fire or depredation by animals.

The State forest area has grown steadily and at a greatly accelerated pace since the end of the second world war. By 1959, over 100,000 acres had been acquired, of which some 50,000 acres had been planted. The present afforestation programme provides for the creation, as soon as possible, of an area of 150,000 acres of productive State forest. To reach this objective, a minimum annual planting rate of 4,000 acres, increasing to 5,000 acres within the next two years, has been set.

Financial provision is made by sums voted annually by Parliament and receipts from forest produce, rentals and other sources. From 1922 to 1959, expenditure amounted to about £6 million, and receipts, other than parliamentary grants, were in the region of £2 million. Output and employment are growing steadily. The area of exploitable private woodlands is at present some 20,000 acres, and private planting, which is gaining impetus, is assisted by schemes for the supply at a low cost of young trees from the ministry's nurseries, by grants towards the cost of the establishment of new plantations, and by free technical advice.

FUEL AND POWER

The main primary sources of energy currently used in Britain are coal, petroleum and, to a small extent, water power; secondary sources produced from these are electricity, gas and coke.

Coal, mined within the country, supplies some 80 per cent of this energy and it will remain the principal source for many years to come. For supplies of crude petroleum Britain is virtually dependent on imports; water power resources are small. A large-scale programme for the construction of nuclear power stations has been inaugurated, and it is estimated that by 1966 nuclear energy may account for some 15 per cent of electricity generating capacity and some 25 per cent of electricity output.

The fuel and power industries, with the exception of the petroleum industry, are under public ownership. General responsibility for ensuring the effective and co-ordinated development of fuel and power resources lies with the Minister of Power. Fuel research is undertaken by the Department of Scientific and Industrial Research as well as by the individual industries.

The Government's long-term fuel and power policy has two principal objectives. The first is to ensure that power supplies are adequate to meet fully and at minimum cost the rapidly growing demands of industry and of the domestic consumer in a country with an expanding national income. The second is to make the best use of indigenous resources and so lighten the load on the balance of payments.

The Government also aims to reduce air pollution. The Clean Air Act, 1956, which came fully into force on 1st June, 1958, makes it an offence to emit dark smoke or to fail to provide industrial premises with equipment to arrest grit and dirt, and empowers local authorities, subject to the approval of the Minister of Housing and Local Government, to declare 'smoke control areas', in which the emission of smoke from chimneys will constitute an offence; provision is made for the payment of grants by local authorities and by the Exchequer towards the costs incurred by owners and occupiers of premises in these areas in making necessary changes to appliances. A Clean Air Council, to review progress and to advise the minister, was set up in May 1957. By the end of March 1959, 100 smoke control areas had been confirmed by the minister.

COAL

Coal has been worked in Britain for over 700 years and an organised coalmining industry has been in existence for over 300 years, some 200 years longer than in any other European country. British coal exports dominated the world coal market until about 1910. By 1913—the peak production year—the industry was producing 287 million tons of coal, exporting 94 million tons and employing over a million workers.

The very fact that the British coalmining industry was developed so early has meant that many of the best seams of coal are now worked out; every year coal has to be mined from deeper and thinner seams and productivity can be maintained only by a high level of investment.

The industry declined during the first world war owing to a shortage of manpower and to the shortage of plant and materials necessary for undertaking any mechanical improvement. Moreover, alternative sources of energy and lower prices in other countries led to a later decline in exports, which had fallen to 67 million tons in 1925.

Attempts at securing economies through amalgamation date from the Sankey Commission of 1919. In 1930, a Coal Mines Act established commissioners to bring about the formation of larger and more efficient units. The Coal Act of 1938 transferred ownership of mineral coal to the State and made it the statutory responsibility of a Coal Commission to accelerate the integration of the industry by reducing still further the number of separate undertakings. At the outbreak of the second world war in 1939, however, this process was not far advanced.

The National Coal Board

In 1942, the Government assumed full control of the industry's operations, though the colliery undertakings continued to own the coal mines. In July 1946, the Coal Industry Nationalisation Act received the Royal Assent. On 1st January, 1947, the assets of the industry were vested in the National Coal Board, which was appointed by the then Minister of Fuel and Power and became responsible for the industry's management. Under the Coal Industry Act, 1949, the board consists of a chairman and not fewer than eight or more than 11 other members; the number of full-time members must not exceed eight and there must be one, and may be two, deputy chairmen.

The main duties of the National Coal Board are:

- (1) to work and get the coal in Great Britain to the exclusion of any other person;
- (2) to secure the efficient development of the coalmining industry; and
- (3) to make supplies of coal available of such qualities and sizes and in such quantities and at such prices as may seem to it best calculated to further the public interest.

The board is also charged with securing the safety, health and welfare of its employees. Its policies must be directed to ensure that its revenues shall be not less than its outgoings properly chargeable to revenue account, on an average of good and bad years.

There are minor exceptions to the board's exclusive monopoly to work coal in Britain: for example, it may license private enterprise to work small mines in which the number of underground workers does not greatly exceed 30, and also to work opencast sites where the total output is not expected to exceed 25,000 tons.

The board is responsible for its own regional organisation. The collieries, numbering about 750, are grouped into 50 areas which are the basic units for commercial management. The size of the areas varies according to geological, geographical and other technical considerations. The areas are grouped into nine divisions which roughly correspond to the main coal-bearing regions. A divisional board for each division supervises and co-ordinates the work of the areas within the division (except in the small south-eastern division, which is administered by a general manager), formulates divisional policy, and is answerable to the National Coal Board, which is responsible for questions of national policy, finance and the co-ordinating of major schemes of development. The day-to-day work of running the collieries is under the direction of colliery managers.

Two Coal Consumers' Councils were set up under the 1946 Act: the *Industrial Coal Consumers' Council*, members of which represent consumers, merchants and suppliers of coal, coke and manufactured fuel for industrial and other purposes, involving supply in bulk; and the *Domestic Coal Consumers' Council*, members of which represent similar groups concerned with coal for domestic use. These two councils have the duty of considering, and where necessary reporting to the Minister of Power on, any matter affecting the sale or supply of these fuels.

In its first year, 1947, the board had a deficit of £23.3 million, and since then has made surpluses in some years and deficits in others. The cumulative deficit at the end of 1958 amounted to over £32 million.

The National Coal Board raises capital by long-term borrowing direct from the Exchequer, instead of through the issue of stock. There is a statutory limit of £650 million at present on such borrowing and special authorisation is needed for borrowing, in any one year, more than £75 million in excess of the highest level of aggregate advances in the preceding year.

Production and Manpower

It has been estimated that Britain's workable reserves of coal will last for about 400 to 500 years at current rates of consumption. But certain types such as high quality coking coal will be exhausted long before then unless they are eked out by blending with other types of coal.

The main coal-bearing areas are: (1) the Yorkshire, Derbyshire and Nottinghamshire field, which produces about 45 per cent of the total output, (2) the Durham and Northumberland field, (3) the South Wales field, and (4) the Scottish field. Other important coal-bearing areas are those of Lancashire and the West Midlands (Staffordshire and Warwickshire). There are no coal-bearing areas in Northern Ireland.

In the early years following nationalisation, the National Coal Board was able to secure quick increases in production and productivity by reorganisation, by a wider application of improved working methods and by increased mechanisation of cutting and conveying. As a result, deepmined production increased from 187 million tons in 1947 to 214 million tons in 1954. Production remained roughly stationary until 1957, but in 1958 a decline in demand resulted in deepmined output falling back to 201.5 million tons. Overall output in tons per man-shift worked at the coal face has increased gradually, and in 1958 reached 3.52 tons as compared with 3.34 tons in 1954 and 3.05 tons in 1938. In addition, output from opencast workings, which are operated by civil engineering contractors on behalf of the board, totalled 14.3 million tons in 1958.

To meet the fall in demand, the board decided to reduce opencast production (in 1959 by 20 to 25 per cent to 11 million tons) and to accelerate the closure of uneconomic pits.

Future progress depends on bringing efficient new mines into production, the development of machines for power-loading the coal at the face on to face-conveyor belts and the reorganisation of the haulage systems. The National Coal Board has launched a large programme of major reconstruction and new sinkings.

During the post-war years until 1957, the industry suffered from a shortage of manpower. During 1958, however, because of falling demand and rising stocks the numbers employed were reduced by over 20,000 to 687,000 (of whom 271,000 were employed at the coal face) at the end of the year, with a further drop in 1959. Recruiting has been temporarily restricted.

Marketing

Although the National Coal Board, as sole producer, makes the first sales of coal it has no monopoly of distribution. In many cases it acts as a wholesaler and in a few areas makes direct retail sales. Retail distribution is, for the most part, carried on by private firms. Control of domestic coal supplies ended in July 1958 and, in the same year, the allocation scheme for industrial coal was brought to an end.

Consumption and Overseas Trade

Coal consumption in Britain increased by an average annual rate of 3 million tons between 1947 and 1956 and, to cover requirements in certain years, supplies had to be imported from the United States. In 1957, sales fell by 5 million tons to 213.2 million tons and in 1958 by over 10 million tons to 202.8 million tons. The reasons for the decline included the pause in the expansion of industrial production, the growing competition from fuel oil and increasing efficiency in the use of coal. There was a further decline in the first half of 1959.

Table 20 summarises the pattern of coal consumption in Britain in the years 1956-58. The electricity authorities took about one-quarter of total supplies, much of it in the form of small coal not suitable for other uses.

TABLE 20
INLAND COAL CONSUMPTION IN THE UNITED KINGDOM 1956-58

Type of User	<i>Million tons</i>		
	1956	1957	1958
Gas	27.8	26.4	24.8
Electricity	45.6	46.5	46.2
Railways (excluding use of briquettes)	12.1	11.4	10.3
Coke ovens	29.3	30.7	27.8
Iron and steel	6.1	5.6	4.5
Engineering and other industries ..	33.3	31.9	29.1
Domestic and miscellaneous ..	64.2	60.7	60.1
TOTALS	218.4	213.2	202.8

Source: Ministry of Power.

Coal exports have fallen heavily in relation to pre-war levels, due, at first, partly to increased internal consumption and, more recently, to keener competition in a diminishing market. In 1958, exports amounted to 5.8 million tons (including one million tons of briquettes) valued at £32.7 million, the principal markets being Denmark, the Irish Republic, France and Norway.

Safety, Health and Welfare

The safety, health and welfare of miners are safeguarded by comprehensive legislation, which was consolidated and brought up to date by the Mines and Quarries Act, 1954. Responsibility for the enforcement of safety regulations lies with the Mines and Quarries Inspectorate of the Ministry of Power.

The National Coal Board has its own safety organisation and, in accordance with the Nationalisation Act, follows a policy directed towards securing the safety, health and welfare of its employees; examples of voluntary action by the board to reduce risks are the installation of fire-resistant conveyor belts, the replacement of light alloy supports (which had been found to be liable to produce dangerous sparks) and the widespread introduction of courses of training for various classes of officials and workmen. The board has also continued to strengthen the medical services which existed before nationalisation. Chief divisional and area medical officers have been appointed and assistant medical officers are being appointed in areas with a labour force of more than 15,000 men. Medical centres are being set up at the pit head.

The board is responsible for its employees' welfare at their work-places, for example, by the provision of pit-head baths and canteens, while the social welfare of coalminers and their families has, since 1952, been the responsibility of the Coal Industry Social Welfare Organisation, which is controlled by the board and the miners' trade unions.

Research into problems of safety and health is carried out also at the Ministry of Power's Safety in Mines Research Establishment, which maintains a close liaison with the Mines Inspectorate and the National Coal Board's research organisation.

Development and Research

Contraction and curtailment of development in the industry since the peak year, 1913, had led to a position in which, by 1950, less than one-third of current output was being obtained from pits started in the twentieth century. Large-scale development was therefore essential.

Capital Investment

In 1950, the National Coal Board announced its long-term plan of development for the industry, involving the reorganisation and increased mechanisation of existing mines and the sinking of new ones. The plan was not rigid, and a revised version (in May 1956) took account of changing circumstances and new knowledge and envisaged the expenditure of £1,000 million in the period 1956-65. In the period 1947-55, capital expenditure had amounted to £462 million. Expenditure under the revised plan totalled £303 million during the years 1956-58, and an outlay of £122 million was planned for 1959. Despite the fall in demand experienced in 1957 and 1958, there is need for substantial investment in the coal industry to ensure that future output comes as far as possible from fully modernised mines capable of producing coal in competition with other sources of energy. A further revision of the plan was due to be published in the autumn of 1959.

Mechanisation

All but a small proportion of coal output is now mechanically cut and conveyed. In 1958, 63 per cent, or 126 million tons, was mechanically cleaned; each man at a mechanically worked coalface produced an average of 6 tons per shift; and 66 million tons were power-loaded, compared with 14 million tons in 1953 and 5 million tons in 1947.

Research

In 1948, the National Coal Board established a central research organisation, the Coal Research Establishment, at Stoke Orchard, near Cheltenham, Gloucestershire, to provide facilities for fundamental research in the coalmining industry, as distinct from the day-to-day scientific control exercised by the divisional and area scientific organisation. A second central research organisation for the investigation of underground problems, the Mining Research Establishment, was formed in 1952 by the board at Isleworth, Middlesex, and a Central Engineering Establishment for developing new machines and testing equipment is now operating near Bretby, in Derbyshire.

The National Coal Board also subscribes to a number of autonomous research associations in receipt of grants from the Department of Scientific and Industrial Research (DSIR), including the British Coal Utilisation Research Association, the British Coke Research Association and the Coal Tar Research Association. In addition, much of the work of other bodies, such as the Safety in Mines Research Establishment of the Ministry of Power, is closely related to the board's problems. The new research station of DSIR at Warren Spring, Stevenage, Hertfordshire, (see also pp. 208-9) is responsible for the fuel research previously undertaken by the former fuel research station at Greenwich. In 1947, the National Coal Board took over, with other assets, the Coal Survey, a national organisation for surveying coal resources within Britain, and 70 laboratories in the various coalfields, which it has since extended and modernised.

In April 1959, the National Coal Board announced the setting up of a new department concerned primarily with the development of new processes for the making of smokeless briquettes from small coal. Research at the Coal Research Establishment at Stoke Orchard had already led to a promising new process.

A committee was appointed by the Minister of Power, in April 1959, to investigate possible methods of converting coal into chemicals, gas and oil, and to recommend further research and development work on any processes that appear to hold promise of industrial application.

PETROLEUM

The petroleum industry in Britain dates back to 1850, when Dr. James Young, a Glasgow chemist, succeeded in obtaining lamp oil and lubricants from natural mineral oil occurring in the Derbyshire coal measures. The Scottish shale deposits, yielding similar products, were first worked in 1858.

Indigenous Production

Sources of crude oil within Britain (including oil extracted from shale) supply altogether less than one per cent of total United Kingdom requirements, the remainder being imported from overseas.

Crude oil is extracted from shale at five shale mines and one opencast quarry and retorted in two crude oil works. Output of shale reached a peak of 3.4 million tons in 1913, but the cost of the processes and other economic difficulties led to a reduction of output. Production amounted to some 740,000 tons in 1958, yielding over 63,000 tons of crude shale oil. From the latter, some 60,000 tons of refined products were obtained. In 1958, about 49,000 tons of motor spirit were obtained from coal by hydrogenation, and 6,000 tons by low temperature carbonisation. Some 304,000 tons of refined benzole were derived from coke ovens and gas works. Prospecting for crude petroleum has so far led to the establishment of several small oilfields in Nottinghamshire (Eakring and Egmanton), in Leicestershire (Plungar), in Lincolnshire (Gainsborough) and in Lancashire (Formby). Annual production of crude oil from indigenous oilfields totals about 80,000 tons. At Broadbench, in Dorset, a single boring has found oil, possibly in commercial quantities. This is the first oil strike in the south of England during the post-war search.

Indigenous crude oil both from shale and from oil wells is refined at Pumpherstons, near Edinburgh.

International Trade

British and British-Dutch oil companies have been responsible for developing the oil resources of many countries to mutual advantage, especially in the Middle East, Far East and Caribbean areas.

Today these companies produce one-third of all oil entering into international trade, with a tanker fleet (part owned by them and part on charter) amounting to nearly one-third of the world's tanker tonnage. (United Kingdom registered tanker tonnage is nearly one-fifth of the world's total.)

In 1958, the United Kingdom imported 33.9 million tons of crude oil, costing £296 million; nearly half came from Kuwait, the other largest suppliers being Iraq, Iran, and Venezuela, in that order.

Consumption

Inland consumption of petroleum products in the United Kingdom, which declined by two per cent in 1957, owing to restrictions imposed during the Suez crisis, recovered sharply in 1958. At 28.5 million tons, excluding refinery consumption, the 1958 total showed a rise of 26 per cent over 1957, and 23 per cent over 1956. The outstanding feature was the further rapid advance in use of black oils; fuel oil consumption rose by 63 per cent between 1957 and 1958 to 10.6

million tons, the chief factor being the large increase in power station usage; while the use of industrial gas oil rose by 25 per cent to nearly 3 million tons. Motor spirit sales rose by 5 per cent. In the first half of 1959 the upward trend in sales of petroleum products continued.

Refineries

Before 1939, three-quarters of the United Kingdom's supply of petroleum products was refined overseas, as it was considered more economical at that time to refine at the source of production. Since the second world war, however, the industry has come to favour the siting of refineries in the consuming areas. The expansion programme in the United Kingdom carried out by the major oil companies between 1947 and 1958 cost nearly £300 million.

By the end of April 1959, refinery capacity in the United Kingdom amounted to some 41 million tons a year. Of the 15 refineries in operation, seven have a capacity of under 0.2 million tons. The largest are situated at Fawley, near Southampton (12 million tons), Shellhaven (4 million tons) and Isle of Grain (7 million tons), both in the Thames Estuary, and Stanlow (5 million tons), in Cheshire. A new refinery at Milford Haven, in Pembrokeshire, costing some £18 million and with a capacity of nearly 5 million tons, is expected to be ready by 1960.

Production of refined products rose from 4 million tons in 1948 to the record total of 30.4 million tons in 1958. There is a substantial external trade in refined products which tends to follow trading and seasonal requirements and the commercial arrangements of the oil companies. United Kingdom exports, mainly in the form of heavier products to European countries, were valued at £106 million in 1958. Imports of refined products were valued at £160 million in 1957, and £138 million in 1958.

Research

Research into problems of petroleum technology is carried out mainly by the leading oil companies, which have also endowed research at the universities on a substantial scale. Research centres are situated at Sunbury-on-Thames (the British Petroleum Company), Thornton, in Cheshire, and Woodstock, in Kent (Shell), and Abingdon, in Berkshire (Esso). Research covers the evolution of new and improved lubricants, the development of new uses for oil and of new products based on oil, especially chemicals.

ELECTRICITY SUPPLY

Public supply of electricity was first provided in 1881, at Godalming, Surrey, though there were earlier demonstrations of its use to consumers, such as the lighting of the Thames Embankment by the former Metropolitan Board of Works. From the earliest days a measure of public control has been a feature of the industry, and the Electric Lighting Act of 1882 authorised the Board of Trade to grant licences for the establishment of electricity undertakings by local authorities or by companies (which the local authorities might compulsorily purchase after a given period of time) to supply consumers in given areas. By the turn of the century, technical developments, including the introduction of the electric motor as a source of motive power, had led to a large increase in the scale of distribution of electricity, and a variety of independent supply systems had grown up all over the country.

It was not until after the first world war that steps were taken to reorganise the industry on a national scale in order to realise the benefits of concentration, integra-

tion and standardisation in electricity supply. In 1919, the Electricity Commissioners were set up as a supervisory body and to promote reorganisation through voluntary agreement. Then, in 1926, the Central Electricity Board was established to co-ordinate more efficiently the generation of electricity. Its main duties were to concentrate the output of electricity in certain stations, selected for their efficiency and low operating costs, and to connect these selected stations with one another and with local distribution undertakings by means of a national system of main transmission lines, known as the Grid. Thenceforward, steady progress was made in putting this plan into effect and, by March 1948, 143 selected stations, out of some 300, were supplying 95 per cent of the electricity generated for public supply.

Organisation under Public Ownership

Under the Electricity Act of 1947, a central authority, then known as the British Electricity Authority, and 14 Area Electricity Boards took over in April 1948 the assets of former municipal and private electricity supply undertakings throughout Great Britain, except in the area already served by the North of Scotland Hydro-Electric Board (see p. 308). Under the Electricity Reorganisation (Scotland) Act of 1954, the authority's functions in Scotland were taken over in April 1955 by the South of Scotland Electricity Board (see p. 308). The name of the authority was changed from British Electricity Authority to Central Electricity Authority and the number of area boards was reduced to twelve.

On 1st January, 1958, under the Electricity Act, 1957, the Central Electricity Authority was dissolved and replaced by two new bodies, the Electricity Council and the Central Electricity Generating Board.

The present organisation of the electricity supply industry, in which more than 200,000 people are employed, is described below.

England and Wales

The *Electricity Council*, the central body of the industry, is composed of a chairman, two deputy chairmen, not more than three other persons, and the chairman and two other members of the Central Electricity Generating Board, and, *ex officio*, the twelve chairmen of the Area Electricity Boards. The main functions of the council are to advise the Minister of Power on matters relating to the electricity supply industry and to promote and assist the maintenance and development by electricity boards in England and Wales of an efficient, co-ordinated and economical system of electricity supply. More specifically, the council is responsible for a number of common services, including capital financing and research.

The *Central Electricity Generating Board* consists of a chairman and not fewer than seven, nor more than nine, other members. The board has taken over certain of the executive functions of the former Central Electricity Authority in England and Wales: i.e. to generate or acquire supplies of electricity and to provide bulk supplies to the area boards.

The *Area Boards* (of which there are at present 12) are responsible for the distribution and sale of electricity in England and Wales. Each consists of a full-time chairman and deputy chairman and four to seven part-time members, appointed by the Minister of Power.

Area Consultative Councils were set up under the Electricity Act, 1947, in the area of each board to represent the interests of consumers. They each consist of between 20 and 30 members, of whom between 40 and 60 per cent are nominated by local authority associations. The chairman of each area consultative council is an *ex officio* member of the corresponding area board. These arrangements continue under the Act of 1957.

The most important functions of the Minister of Power in England and Wales, under the new arrangements, are: to appoint the chairmen, deputy chairmen and members of the Electricity Council and the Central Electricity Generating Board; to approve each area board's capital development plans and the industry's research programme; and to approve, in consultation with the Treasury, the board's borrowing requirements, having regard to the development programmes submitted by the industry. The minister also has power to issue general directions to the council and the boards if he considers this necessary in the national interest.

The Central Electricity Authority (and its successors the Electricity Council and the Central Electricity Generating Board) together with the area boards, have made a consolidated net surplus on their operations in each of the years since they were established. Up to and including the financial year 1957-58, these surpluses amounted in the aggregate to over £98 million. Under the 1957 Act, each electricity board, as distinct from the industry as a whole, must pay its own way, taking one year with another.

Scotland

The *North of Scotland Hydro-Electric Board* was set up in 1943 as a public corporation to develop the water power resources of the Highlands and Islands and to distribute electricity in the more sparsely populated parts of Scotland not covered by existing undertakings. The board consists of a chairman, a deputy chairman and not fewer than four nor more than eight other members, appointed by the Secretary of State for Scotland.

The Act of 1947 made the North of Scotland Hydro-Electric Board solely responsible to the Secretary of State for Scotland for all generation and distribution in its area. This area was extended under the Act to include that part of Scotland north and west of a line running roughly from Dumbarton on the Firth of Clyde to Newburgh on the Firth of Tay.

On 1st April, 1955, the *South of Scotland Electricity Board*, answerable to the Secretary of State for Scotland, took over the then British Electricity Authority's functions in Scotland, and also the functions of the two area boards in the south of Scotland, which were dissolved. The board consists of a chairman, deputy chairman, and not fewer than four nor more than eight other members, appointed by the Secretary of State for Scotland.

Under the Electricity Reorganisation (Scotland) Act, 1954, the then Minister of Fuel and Power retained only three functions in regard to electricity in Scotland, namely, to act jointly with the Secretary of State on matters relating to staff pensions and to safety measures, and to remain solely responsible for the certification of meters.

A consultative council has been appointed for the district of each board by the Secretary of State, to represent the interests of consumers. The constitutions of these councils are similar to those of the area consultative councils, and the chairman of each is a member of the appropriate board.

Northern Ireland

In Northern Ireland, electricity is generated at power stations in Belfast, Ballylumford, Larne and Londonderry. Those in Belfast are owned and operated by the Belfast Corporation, and the next two by the *Electricity Board for Northern Ireland*. Generation at these stations is co-ordinated by the *Northern Ireland Joint Electricity Committee*, set up by statute in 1948, which purchases their output and resells it to distributors—the Belfast Corporation, for Belfast and district, and the Electricity Board for the rest of Northern Ireland except Londonderry. In Londonderry the city council both generates and distributes electricity independently of the committee.

Generation

Most of Britain's electricity is produced in coal-fired steam generating stations. Abundant supplies of coal, together with good rail and water transport for moving it, in contrast to the remote and scattered location of relatively small water power resources, led to this preponderant development of electricity supplies from thermal generating stations. The development of hydro-electricity on any scale is comparatively recent.

The installed generating capacity of the electricity authorities (including the North of Scotland Hydro-Electric Board) in Great Britain at the end of 1958 totalled 28,023 megawatts (MW)—maximum continuous rating—compared with 12,546 MW at the end of 1946, and 20,562 MW at the end of 1954.

Sales of electricity in Northern Ireland (where the total installed generating capacity of 444 MW is in coal-fired thermal stations) amounted to 1,190 million kilowatt-hours in 1958, when the maximum load sustained was 362 MW.

In 1958, 96,236 million units (one unit = one kilowatt-hour), or slightly under 98 per cent of the public supply in Great Britain, was generated at steam stations, 2,109 million units, or about 2 per cent, from water power, and 153 million units by other means, e.g., diesel and waste heat and refuse destruction. The high rate of expansion of output, which has been a feature of the industry since its earliest years, has been continued since the war. Total production in 1958 was more than nine times that of 1930, and had increased by 50 per cent since 1953.

Thermal. The electricity authorities are the largest consumers of primary fuel in Britain, and, in 1958, used 47.2 million tons of coal and coke and about 2.6 million tons of oil (seven times the quantity used in 1956). Average thermal efficiency of steam stations in England and Wales (i.e. the ratio of power output to the fuel consumed) rose from 21.9 per cent in 1947 to 25.99 per cent in 1958 as new plant was brought into use. Twenty stations containing much of the newest plant had an average efficiency of 30.23 per cent in that year.

The Central Electricity Generating Board will have in commission by 1962 a generating set of 275 MW capacity, and, a year later, a 550 MW set is due to be commissioned at Thorpe Marsh, near Doncaster. The latter is much larger than any now in operation, and, as far as is known, than any at present projected anywhere in the world. These large machines will show substantial economies in capital cost, in fuel consumption and in operational costs. At present, the generating stations installed at Blyth in Northumberland, at Drakelow, near Burton-upon-Trent, Derbyshire, and at Kincardine in Scotland are the largest in Britain, each with a capacity of 120 MW. Reheat steam turbines of 200 MW are to be installed at High Marnham, in the east Midlands, West Thurrock near Grays, Essex, and Willington, near Derby. The largest power station yet projected in Britain—one of 1,500 MW, which will also be situated at Drakelow—received ministerial consent in April 1959.

Hydro-Electric. The setting up of the North of Scotland Hydro-Electric Board in 1943 marked the beginning of a new era of intensive water power development in the Highlands of Scotland. A development scheme drawn up by the board in 1944, showing the water power resources which it proposed to examine, listed 102 hydro-electric projects with an estimated annual output of 6,274 million units of electricity. The ultimate output of hydro-electric power is expected to be substantially higher and eventually may exceed 10,000 million units. In 1958, 1,683 million units were generated from water power compared with 322 million in 1949. At the end of 1958, there were 35 full-scale hydro-electric stations in operation in Scotland with a total capacity of 810 MW and the largest—the Loch Sloy station—

had a capacity of 130 MW; further hydro-electric schemes with a total capacity of 672 MW were under consideration.

Alternative Fuels. To meet increasing demands for electricity, generation from alternative fuels is being promoted. The chief alternatives are oil and nuclear energy. As regards oil, dual firing apparatus able to use either coal or oil has been fitted to a new power station at Marchwood, on Southampton Water, and similar apparatus has been installed in 10 other power stations, which are also situated on river estuaries and thus able to be fed conveniently from nearby oil refineries. Another alternative, used in Scotland, is peat; a pilot project at Altnabreac, Caithness, is in operation, and the peat is used in the peat-burning gas turbine developed by a Scottish firm assisted financially by the Development Fund.

Nuclear Power Stations

As an extension of its experimental work and to produce plutonium, the United Kingdom Atomic Energy Authority (UKAEA) has built and is building a number of reactors which also produce electricity. There are two stations at Calder Hall, in Cumberland, A and B, which together have an output capacity of some 150 MW. Each has two reactors; the first of the two at the A station started operating in May 1956, and, on being connected to the Grid by the Queen on 17th October, 1956, became the first nuclear power station in the world to produce electricity on an industrial scale. Both reactors at the A station have been supplying electricity to the Grid since February 1957; over 750 million units had been supplied up to December 1958. The first reactor at the B station started operating in March 1958 and was delivering electricity before the end of that year; the second reactor began delivering electricity in March 1959. Similar stations at Chapelcross, in Dumfriesshire, were expected to be completed by the end of 1959; the first of the four reactors started to provide electricity in February 1959.

The main commercial power stations under the Government's nuclear power programme are being built for the electricity authorities by groups of manufacturers specially organised for the construction of nuclear power plants (see also p. 331). The revised Government programme, announced in March 1957, provides for between 5,000 and 6,000 MW capacity for the generation of electricity from nuclear energy to be brought into operation by the end of 1965. In October 1957, the target date for the completion of the programme was extended to the end of 1966, by which time nuclear energy may be contributing some 25 per cent of total electricity output, assuming operation at not less than 75 per cent load factor. It will be producing the equivalent of 18 million tons of coal (or 10 million tons of oil) required by conventional stations for a similar output. The total cost of the programme is estimated at about £900 million, including £177 million for the initial charges of uranium fuel.

Special factors have to be taken into account in the siting of the nuclear power stations, notably the need for firm rock foundations to bear the great weight of the reactors and their supporting structure, a location distant from heavily built-up areas, and plentiful supplies of water for cooling. Work on two stations—at Bradwell in Essex (300 MW installed capacity) and at Berkeley in Gloucestershire (275 MW)—started in January 1957, and is due for completion by 1961. Two further stations at Hunterston (360 MW), in Ayrshire, Scotland, and at Hinkley Point (500 MW), in Somerset, will be ready in 1961 and 1962. Provision is being made for a possible doubling of capacity at Hinkley Point. At the end of June 1959, work started on a fifth nuclear power station at Trawsfynydd (500 MW), in North Wales, which is expected to be in operation by 1964. Approval has been given for the construction of a sixth station at Dungeness in Kent.



Hereford cows and calves, one of Britain's famous breeds of beef cattle, on the Welsh border.

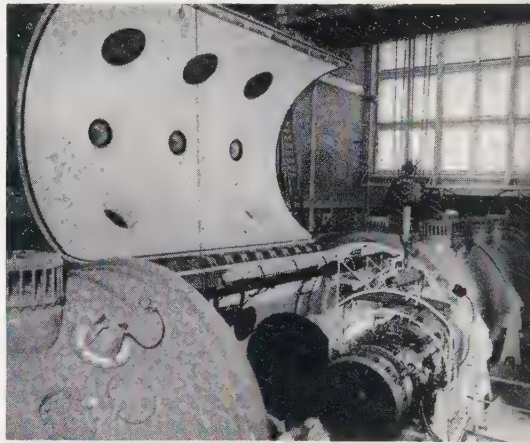


The 1959 Aberdeen Angus champion at Perth, Scotland, was sold to a United States' buyer for 25,000 guineas.

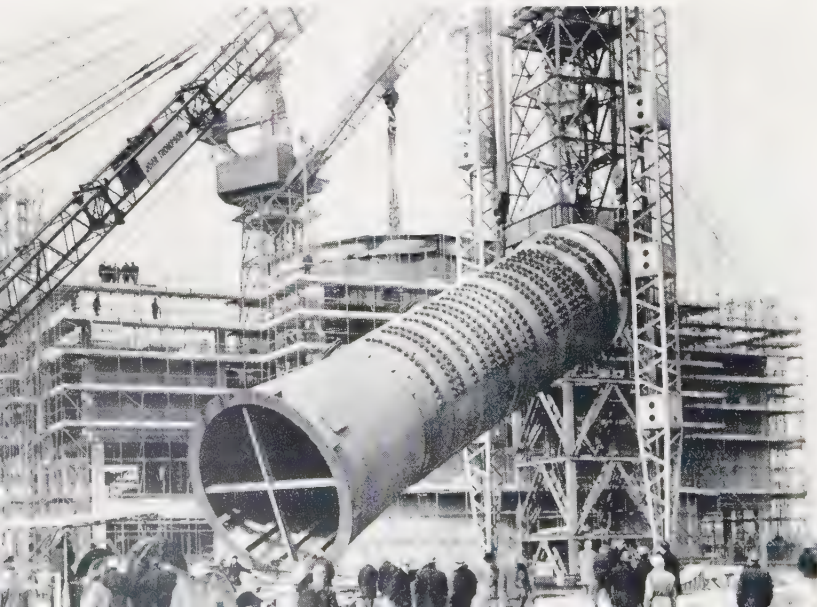


The British Hydrocarbon Chemicals plant at Grangemouth, Scotland, one of Britain's major petroleum chemical establishments (see p. 339).

A *Conway* by-pass gas turbine engine being fitted into one of the test cells at the Rolls-Royce altitude test plant at Derby.



Berkeley Nuclear Power Station under construction; one of about 12 nuclear power stations to be built for the electricity authorities, it is due for completion by 1961 (see p. 310).



Sites for additional stations are being considered—at Sizewell, in Suffolk; Eärnley, in west Sussex; Hamstead, on the Isle of Wight; at several points on the coast of Anglesey; at Edern, in North Wales; and at Oldbury-upon-Severn, Gloucestershire. The Northern Ireland Electricity Board is planning to build a station on a site yet to be determined.

A series of engineering advances are enabling nuclear power stations with greatly improved output to be constructed. Thus the station proposed at Sizewell is expected to have an output capacity of 650 MW (the largest so far projected in the world) and one of as much as 1,000 MW is envisaged for the station at Oldbury-upon-Severn. As a result, it is expected that not more than 14 stations will be required for the 6,000 MW programme.

Pumped Storage. In order that nuclear power stations with their higher capital costs and lower operating costs should be run as continuously as possible, pumped storage schemes are being developed. Construction started at Blaenau Ffestiniog, near Trawsfynydd in North Wales, in 1956, of a 300 MW pumped storage scheme, and suitable sites for other such schemes are being investigated. The first large-scale pumped storage works in Scotland, comprising a 400 MW combined pumping and generating plant costing some £24.5 million, forms part of the Loch Awe Construction Scheme, which received the approval of Parliament in May 1959.

Sites in Northern Ireland suitable for this type of project are being surveyed.

Transmission and Distribution

Main electricity transmission lines—the National Grid—cover most of the country. In 1958, those of the Central Electricity Generating Board totalled some 5,900 route miles (9,420 circuit miles), of which 584 miles were operated at 275,000 volts, 4,955 miles were operated at 132,000 volts and the remainder at 66,000 volts and below. In Scotland, there were 2,571 circuit miles of main transmission lines at the end of 1958, of which 170 circuit miles operated at 275,000 volts and the remainder at 132,000 volts. Energy movements on the Grid in England and Wales are controlled through the seven operational areas, set up for that purpose and distinct from the divisions in which the generating side of the industry is organised; each area has a separate control, and the operations are co-ordinated by a National Control in London. The Grid in Scotland is operated from the North of Scotland control centre at Tummel Bridge and the South of Scotland control centre at Glasgow.

The new Supergrid of main transmission lines at 275,000 volts will assist in meeting the growing demand for electricity during the next 20 years and will make the British electricity supply the most closely integrated power network in the world. A scheme for interchange of energy by direct current by means of a single cross-Channel cable link capable of transmitting up to 160 MW at 200,000 volts (direct current) is expected to be in operation by 1960–61. It is estimated to cost £4 million. The object of the scheme is to take advantage of the differences in the incidence of peak loads in the two countries.

In England and Wales, the Area Electricity Boards distribute to consumers electricity acquired mainly from the Central Electricity Generating Board, but in part from other sources, e.g., collieries. There are 15.1 million consumers, an increase of about 5.5 million on those supplied in December 1939. Industrial concerns are the biggest users of electricity and their demands are increasing rapidly. The principal domestic uses of electricity are for lighting, cooking, and for space and water heating, but the demand for numerous other domestic purposes is increasing.

The North of Scotland Hydro-Electric Board has also pressed ahead with the distribution of electricity to consumers in the north of Scotland. At the end of 1958, there were 374,200 consumers of electricity in the board's district and 63.4 per cent of the farms and crofts had a supply of electricity. At the same date the South of Scotland Electricity Board supplied 1,321,488 consumers, including 88.3 per cent of the farmers in the area.

Capital Investment

About 8 per cent of the annual gross fixed capital formation of the United Kingdom is attributable to the electricity supply industry. Capital expenditure by the industry on thermal plant over the eleven years 1956-67 is estimated at about £3,300 million, broadly made up as follows: transmission and distribution, £1,400 million; construction of conventional stations, £835 million; nuclear power stations, £900 million.

The long-term capital of the electricity authorities is obtained from both internal resources and borrowing. Under the Finance Act, 1956, as amended by that of 1958, the authorities have power to raise money by means of Exchequer advances from the Minister of Power and the Secretary of State for Scotland. Since 1956, issues of stock have been suspended and the authorities have had recourse to Exchequer advances.

Total capital expenditure of the electricity supply industry in Great Britain from the time of its nationalisation (in 1947) to 31st March, 1958 (in the case of the council) and 31st December, 1957 (in the case of the boards) amounted to £1,922 million, of which £591 million had been financed from internal resources, leaving £1,331 million to be raised by borrowing against a total statutory authorisation of £1,675 million. The Electricity (Borrowing Powers) Act, 1959, authorised an increase in maximum borrowings from £1,675 million to £2,150 million. The minister is authorised, under certain circumstances, to raise this ceiling to £2,735 million. The position in the case of each authority is shown in Table 21.

In England and Wales, the Electricity Council estimates that demand for electricity will rise by an average of 6.6 per cent annually compared with an annual average of 7.6 per cent in the seven years ended in 1958. In 1958-59, actual capital expenditure is estimated at £258.5 million and expenditure approved for 1959-60 amounts to £303.5 million. In addition, authority has been given for the expenditure of £8.9 million on nuclear fuel in 1959-60.

In Scotland, demand for electricity doubles itself about every ten years. Expenditure in 1958 by the North of Scotland Hydro-Electric Board totalled £15.4 million, and £15.75 million has been approved for 1959. Expenditure in 1958 by the South of Scotland Electricity Board amounted to £27.6 million and a sum of £28.25 million has been approved for 1959.

Research

The Electricity Council undertakes research on its own account and helps to finance research through its membership of the British Electrical and Allied Industries Research Association, an organisation to which manufacturing firms and large consumers of electricity also belong and which was established before the supply industry passed into public ownership. This association is one of the autonomous research associations in receipt of grants from the Department of Scientific and Industrial Research. The Electricity Council also has an Electricity Supply Research Council including independent experts to advise it and the area boards, and can consult the Minister of Power's Scientific Advisory Council on problems affecting the supply and use of electricity. Direct research on a laboratory

scale is carried on by the Central Electricity Generating Board at the Electricity Council's laboratories at Leatherhead, Surrey.

The Central Electricity Generating Board announced in March 1959 that it was to establish a new research centre, at a cost of £1 million, adjacent to the Berkeley nuclear power station in Gloucestershire. The centre will be used to investigate operational techniques and problems arising in the running of nuclear power stations.

TABLE 21
BORROWINGS OF THE ELECTRICITY SUPPLY INDUSTRY

£ million

	Statutory borrowing limits prior to 1959 Act	Borrow- ings out- standing at March 1959	Estimated additional borrow- ings required (to 1965)	Total borrow- ings required (to 1965)	New borrowing limits(a)
Electricity Council ..	1,400(b)	1,140	1,150	2,290	1,800- 2,300
North of Scotland Hydro-Electric Board	200(c)	164	135	299	240-300
South of Scotland Electricity Board	75(d)	27	105	132	110-135
TOTALS, GREAT BRITAIN	1,675	1,331	1,390	2,721	2,150- 2,735

Source: *Cmnd.* 618, and Ministry of Power.

(a) Under the Electricity (Borrowing Powers) Act, 1959. The lower limit without, the upper only with, further ministerial authorisation.

(b) Electricity Act, 1957.

(c) Electricity Act, 1947 as amended by the Hydro-Electric Development (Scotland) Act, 1952.

(d) Electricity Act, 1947, as amended by the Electricity Reorganisation (Scotland) Act, 1954.

GAS SUPPLY

Public supply of gas in Britain dates from 1807, when Pall Mall, London, was first lighted with gas. In 1812 the London and Westminster Gas Light and Coke Company received a Royal Charter to supply gaslight in London. In the early years of the industry, gas was used almost exclusively for lighting and was provided by a growing number of company and municipal undertakings. After the middle of the century and the invention of the Bunsen burner in 1855, gas was used increasingly as a source of heat for many purposes, such as domestic cooking and space and water heating, in addition to a number of industrial uses. In the last twenty years of the century, however, gas for lighting purposes was subjected to increasing competition from the new electricity supply industry; but the invention of the Welsbach incandescent mantle in 1887, which raised the efficiency of gas lighting very considerably, enabled the industry to hold its own while the supply of gas for purposes other than lighting increased.

The gas industry in its present form developed in the main during the period between the wars when increasing competition from electricity had to be met and when changes in social habits and outlook were taking place. The industry undertook a large-scale programme of modernisation of production and distribution and launched widespread sales promotion campaigns, especially for the numerous uses of gas in the home. By 1939, the industry had become mainly a supplier of heating instead of lighting.

Organisation under Public Ownership

The Gas Act of 1948 brought the gas industry under public ownership and control on 1st May, 1949. The assets of 991 undertakings, of which 269 belonged to local authorities, were vested in 12 Area Gas Boards. Together they cover the whole of Great Britain and are charged with a statutory duty to develop and maintain an efficient, co-ordinated and economical system of gas supply to domestic, industrial and other consumers. The national body is the *Gas Council*, which is appointed by the Minister of Power and is responsible, among other matters, for advising him on questions affecting the gas industry. It is a co-ordinating council, not a trading body. It consists of a full-time chairman and deputy chairman and the twelve chairmen of the area boards.

The *Area Gas Boards*, which have a large measure of financial and operational responsibility and are similar in most respects to the central bodies of the other publicly owned corporations, are charged with the responsibility of manufacturing and distributing gas to consumers. Each of the Area Gas Boards, which, like the Gas Council, are appointed by the Minister of Power, consists of a full-time chairman and deputy chairman, in some cases one, and in three cases two, full-time members, and usually five or six part-time members, including the chairman of the Area Consultative Council. There is no common pattern of organisation; each board is fully independent and has devised its own subordinate structure. Each board is required to pay its way, taking one year with another.

When the gas industry came under public ownership, a link between the industry and the consuming public was established by the creation of a *Consultative Council* in each board area. These councils consist of not fewer than 20 and not more than 30 members, of whom between 50 and 75 per cent are chosen from panels of persons nominated by the local authority associations.

In Northern Ireland, the gas supply industry remains in the hands of a number of municipal undertakings and statutory and non-statutory companies.

Although the Gas Council is not a trading body, the operations of the area boards have resulted, in the nine years up to 31st March, 1958, in an aggregate disposable surplus of approximately £23 million before taxation.

Production

In 1958, in Great Britain, 25 million tons of coal were carbonised by gas undertakings and 28 million tons by coke ovens operated outside the gas industry. Nearly one-third of the output of gas from coke ovens is sold to gas undertakings for general distribution; the remainder is mainly consumed at the ovens or at collieries or steelworks.

In 1921, 250,300 million cubic feet of gas was manufactured by authorised gas undertakings or acquired from coke ovens, and the number of consumers was 7.6 million. By 1958, gas manufactured and acquired from coke ovens and other sources for distribution had risen to 592,600 million cubic feet and the number of consumers had risen to over 12.9 million, an increase of 137 per cent in the volume of gas available and of about 70 per cent in the number of consumers.

In 1958, the quantity of gas produced in Northern Ireland was 7,165 million cubic feet, most of it for household use.

The total number of persons employed in the gas industry in Great Britain in 1958 was about 134,000.

Consumption

Half of all gas produced is sold for household use and the remainder for industrial and commercial purposes.

Domestic Use. While an accurate statistical analysis of the domestic load is not possible, evidence given before the Ridley Committee (on Fuel and Power Policy), appointed by the then Minister of Fuel and Power in 1951, suggested that about 70 per cent of the domestic load was used for cooking, the remaining 30 per cent being spread over space heating, water heating and other installations. Most homes in Britain are now supplied with gas, except in some rural areas where, owing to difficulties in storage and transmission, gas is not economic. These difficulties have been overcome to some extent by the use of local high-pressure storage tanks but this development is unlikely to grow, owing to the steady extension of rural electricity supplies. Bottled gas, derived from petroleum, is widely used in rural areas.

Industrial and Commercial Use. Gas is used extensively in industries which require the control of temperatures to a fine degree of accuracy, for example, in the pottery industry and in certain processes in the manufacture of iron and steel products. In 1958, industrial consumption of gas totalled 165,800 million cubic feet.

Coke and By-products

Production of coke at gas works in 1958 was 11.1 million tons, and at coke ovens 18.5 million tons. The gas industry and coke ovens jointly produce about 3 million tons of crude coal tar and 108 million gallons of crude benzole a year. These products, together with those of the phenolic and basic types and sulphur, provide a source for the manufacture of essential derivatives which include dyestuffs (of which Britain now produces most of its own requirements), fertilisers, plastics, germicides (the sulphonamides and sulphanilamides), insecticides, refrigerants, perfumes, and synthetic yarns.

With further research and development, more especially in the field of organic chemistry, the production of coal carbonisation derivatives is of great importance to the industry.

Capital Investment, Development and Research

The chief objects of capital expenditure in the years immediately after the war were to overtake arrears of plant renewal. Plans for further expansion were approved by the then Minister of Fuel and Power in 1954 and are outlined in the Gas Council's publication *Fuel for the Nation*.

Under the Gas Act, 1948, borrowing by the Gas Council and the Area Gas Boards was limited to £250 million. The Gas and Electricity (Borrowing Powers) Act, 1954, extended these borrowing powers to £450 million.

The industry in recent years has been spending about £50 million a year on capital investment. Between vesting day (1st May, 1949) and March 1958, £422 million had been invested in fixed assets, of which £154 million had been provided out of depreciation. Estimated capital expenditure in 1958-59 totalled £48.8 million and a further £55.5 million has been approved for 1959-60.

The post-war structure of the industry has already permitted considerable integration by the linking of undertakings for the transmission of gas (through gas grids and long-distance mains), enabling production to be concentrated in the most efficient units. Progress is also being made in interconnections for the reception of gas from coke ovens, notably in Wales, Durham and Yorkshire.

The industry is investigating processes of gasifying coal of inferior quality. In October 1958, work was started at Westfield, in Fife, Scotland, on a gas plant, to cost £6.6 million, using low-grade coal. This plant is planned to provide, by the autumn of 1960, some 15 million cubic feet of gas a day and, when completed by 1962, will be producing 30 million cubic feet of gas a day, about one-fifth of the total gas requirements of Scotland. The plant marks a change within the industry from conventional carbonisation of coal to the use of chemical processes. Because the gas will be made at high pressure, it will be possible to pipe it through a 133-mile grid-main covering industrial Scotland. Further advantages of this method are low costs and the production of by-products such as tar, ammonia and benzole. Experiments in the gasification of poor quality deep-mined coal are taking place at Coleshill, in Warwickshire.

Alternative sources of gas are being developed by the Gas Council. Gases from oil refineries (butane or propane) are used in several installations in smaller towns remote from large gas works or the grid systems. Progress has also been made with the use of methane, drained from coal mines. A new process for the hydrogenation of petroleum fuels (and, it is hoped, ultimately, of poor quality coal) evolved by the Gas Council's Midland Research Station at Solihull, near Birmingham, is to be applied in a £2 million pilot plant at Partington, near Manchester.

By March 1959, 30 oil gasification plants had been completed. These include a plant, jointly constructed by the South Eastern Gas Board and the British Petroleum Company, to convert petroleum products from the company's Kent oil refinery to gas of acceptable quality. This installation, which began operating in the summer of 1958, converts some 50,000 tons of petroleum products a year to gas and has a daily output of 18 million cubic feet of gas.

The world's first shipload of liquid natural gas arrived at Canvey Island, Essex, from the United States Gulf Coast, in February 1959 in a specially converted 3,000-ton cargo ship, the *Methane Pioneer*, owned jointly by the Gas Council and an American concern. This experimental quantity of 2,000 tons was re-formed by the North Thames Gas Board at Romford by the Onia-Gegi catalytic process. If the experiment proves successful, imports on a much larger scale may be undertaken.

The research organisation established by the Gas Council consists of a research committee which advises the council on initiation and implementation of research policy, two research stations, one in London and one at Solihull, and the Watson House Centre at Fulham, London, for the design, testing and development of appliances. Research is also carried out on behalf of the Gas Council at Leeds University and at other universities and colleges.

FUEL EFFICIENCY

The Government has for a number of years sought to promote efficiency in the use of fuel, among both industrial and domestic users, and has been assisted by various bodies representative of producers and consumers.

The *Coal Utilisation Council* consists of representatives of the National Coal Board, coal distributors and coal appliance manufacturers. It was formed in 1932 to give information and advice on the best use of solid fuel, including the choice

of installation and the operation of solid fuel appliances, to domestic users and to retailers. During the second world war, the reduction in coal production and the demands of war industry made economy imperative. When the Ministry of Fuel and Power was formed in 1942, an industrial fuel advisory service with regional branches was incorporated within it. In 1943 the *Women's Advisory Council on Solid Fuel*, consisting mainly of representatives of appliance manufacturers, women's organisations and others interested in the housewife's point of view on domestic fuel arrangements, was formed to advise women on the use of solid fuel for heating and cooking.

A non-profit-making company, the *National Industrial Fuel Efficiency Service*, which was formed to promote fuel saving in industry, came into operation in May 1954. It provides advice and services to all non-domestic fuel users in a variety of forms, from 'spot' inspection to full-scale heat and power surveys and regular visits on a contract basis.

WATER SUPPLY

Britain's water resources are, in general, sufficient for domestic and industrial requirements. The sources of water, however, are often distant from the areas where supplies are needed, and water undertakings are therefore mainly concerned with abstraction, storage, treatment and distribution. Supplies are obtained partly from surface sources such as mountain lakes, streams impounded in upland gathering grounds and river intakes, and partly from underground sources by means of wells, adits and boreholes. Unlike other public services in Great Britain, such as electricity and gas, water supply remains in the hands of a large number of undertakings of different kinds. Ministerial responsibility for national water policy rests with the Minister of Housing and Local Government in England and Wales, with the Secretary of State for Scotland in Scotland and with the Minister of Health and Local Government in Northern Ireland.

Development of Water Supply in England and Wales

It was not until the nineteenth century that the provision of water supplies became a general public service and then only after long and bitter controversy. It was largely due to the efforts of Edwin Chadwick and his colleagues, who demonstrated the dangers arising from inadequate water supply and sanitation, that the Public Health Act, 1848, became law in England and Wales and laid the basis for a long series of statutes dealing with public health.

From the middle of the nineteenth century onwards a number of separate large water undertakings were set up to provide adequate supplies of pure water to the expanding urban population, and the water supply system developed rapidly, although in piecemeal fashion and with some overlapping and waste.

Organisation of Water Supply in England and Wales

Local authorities have a duty as sanitary authorities to ensure that water supplies are adequate for the needs of their areas, and they may do this either by operating a water undertaking themselves or by ensuring that other bodies are providing an adequate supply. The householder receives his domestic water supply at a comparatively small charge, varying in different areas, which he usually pays by way of a water rate levied, like other rates, on the value of his house.

By the Water Act, 1945, the Minister of Housing and Local Government has a duty to promote the conservation and proper use of water supplies in England and Wales. The same Act provided for a statutory Central Advisory Water Committee

(replacing the previous non-statutory committee) to advise the minister on general questions relating to water and to deal with the local organisation of water supplies and the powers and duties of local authorities and other water concerns. Local authorities were required, in extension of the duties placed on them under the Public Health Acts, to secure piped wholesome water in every part of their districts where there were houses or schools, unless it was impracticable to do so at reasonable cost.

In the years between the passing of the Water Act and 1959, 324 smaller water authorities in England and Wales were absorbed by larger authorities or by the creation of joint boards. The principal object of such amalgamation is the constitution of more efficient units in the water supply industry, and efforts to reduce the number of separate undertakings have recently been intensified.

In March 1959, there were, in England and Wales, 808 local authority water undertakings, 67 joint water boards (including bulk supply boards) and 13 joint water committees, 77 statutory water companies, 18 non-statutory water companies, and 3 private proprietors with statutory powers. A considerable number of private proprietors without statutory powers also provide small supplies. Water undertakings vary greatly in size; about half the population is served by the 55 largest undertakings, and the other half by over 900 smaller ones.

The *Metropolitan Water Board*, which is probably the largest single water undertaking in the world, supplies about 335 million gallons daily to about 6.5 million people in the London area. The board was established in 1903, and in the following year took over the undertakings of eight water companies which were supplying the London area. It now consists of 88 part-time members who are the elected representatives of the various local authorities within the board's area of operations, together with one representative each from the Thames and Lee Conservancies. The chairman and vice-chairman are chosen by members of the board.

Present Supplies in England and Wales

Today, piped water reaches some 97 per cent of the total population of England and Wales and more than 90 per cent of the rural population.

About £30 million a year is spent on capital development, financed mainly by loans, the interest on which, together with running costs, is paid by the water undertakings from annual income. This income is derived from local water rates levied on domestic consumers and from charges for supplies as recorded by meter in the case of most industrial users. In addition to supplies from water undertakings, large quantities of water are taken by industry from rivers or underground sources.

The provision of piped supplies for rural districts has been assisted by grants under the Rural Water Supplies Act, 1934, and under the Rural Water Supplies and Sewerage Acts, 1944 to 1955. By March 1959, schemes costing £74 million had been completed or were in progress with the aid of grants under these Acts.

The steady growth of towns in England and Wales has meant increased demands for water and some diminution in supplies in so far as such growth involves covering the ground with impervious material, so that water which previously would have percolated through to underground natural reservoirs is now carried off in drains and rivers. On the other hand, improved methods of purification in recent years have resulted in greater use being made of water drawn from the lower reaches of rivers. In 1955, a sub-committee was set up by the Central Advisory Water Committee to study the growing demand for water and the problems involved in meeting it. In its first report, *The Growing Demand for Water*, published in February 1959, the sub-committee stated that in spite of an expected 23 per cent increase in consumption of water in the ten years ending 1965, development

schemes prepared by the public water suppliers should enable them amply to meet likely demands. After 1965, the country's rainfall would be sufficient to ensure an adequate supply of water to meet growing needs, provided that the proper means of conservation and distribution were developed.

Water Supply in Scotland and Northern Ireland

In Scotland, public water undertakings are carried on entirely by local authorities, either separately or in combination with each other; they supply over 95 per cent of the total population. The water problem in Scotland is broadly similar to that in England and Wales save that less reliance needs to be placed on underground sources. Scotland has separate legislation. The Water (Scotland) Acts, 1946 and 1949, among other provisions, impose a general duty on the Secretary of State to promote the conservation of water resources in Scotland; require local authorities to provide supplies of wholesome water everywhere in their districts, where this can be done at reasonable cost; and provide for a uniform system of rating for water throughout the country. The Rural Water Supplies and Sewerage Acts, 1944 to 1955, make available to Scottish local authorities grant assistance up to a maximum of £30 million towards the cost of water supplies and sewerage schemes in rural areas. By December 1958, water schemes for rural areas costing £12.6 million had been completed with the aid of such grants, and schemes worth £14.9 million were in progress.

Northern Ireland has abundant supplies of water. The Water Supplies and Sewerage Act (Northern Ireland), 1945, in addition to making provision for the payment of Government grants to all water supply authorities, places upon them statutory obligations with regard to the supply of water to houses and schools. Since 1945, a piped water supply has been, or is being, provided for every town, and in rural areas piped water supplies are being extended. Progress has been very rapid, and at 30th September, 1958, £20.8 million had been expended, including grants totalling £8.9 million.

River Management

The 32 river boards set up under the River Boards Act, 1948, carry out the functions and co-ordinate the various aspects of river management in England and Wales previously performed by a large number of separate authorities.

Each river board covers a river board area. The river board areas together comprise the whole of England and Wales, except the Thames and Lee Catchment Areas (which are under the jurisdiction of the Thames Conservancy and Lee Conservancy Catchment Boards¹ respectively), the administrative county of London, and areas adjoining that county not included in any catchment area.

River boards are composite bodies representing local government, agricultural and fishery interests, and most of their expenses are apportioned among the councils of the counties or county boroughs concerned, in proportion to the rateable values of property in the river board area.

River management in Scotland and Northern Ireland has not been concentrated to the same extent.

It is an offence for any person to permit any polluting matter, solid or liquid, to enter a river. The Rivers (Prevention of Pollution) Act, 1951, revised and

¹ The Thames Conservancy and Lee Conservancy Catchment Boards are similar in constitution and powers to the river boards; because London draws most of its water supplies from these two rivers, however, they have long been regulated under powers granted by Acts of Parliament of purely local application.

strengthened previous legislation for the prevention of river pollution in England and Wales. Enforcement of the Act is vested in the river boards, the Thames and Lee conservators, and, in London and adjacent areas, in the councils of the metropolitan boroughs, counties, and county boroughs concerned. There is a similar Act for Scotland under which nine river purification boards have been set up to promote the cleanliness of the rivers in their areas."

Measurement of Water Resources

Information on the yield, behaviour and quantity of the nation's surface water resources is provided in the *Surface Water Year Book of Great Britain*, published annually by H.M. Stationery Office. This publication contains particulars of the run-off and related rainfall from a large number of rivers, streams and reservoirated areas. The Surface Water Survey Centre of the Ministry of Housing and Local Government is responsible for the promotion of gauging, the collection of hydrological information, and the publication of the year book. The field work of surface water measurement is carried out by river boards, water undertakings and other bodies. General information on rainfall, published annually in *British Rainfall*, is the responsibility of the Meteorological Office, while the subject of ground water comes under the Geological Survey and Museum. In special cases the Hydraulics Research Station of the Department of Scientific and Industrial Research carries out research into problems of the design and calibration of gauging weirs and flumes for the measurement of surface water. A close liaison is maintained between these organisations.

A report by a sub-committee of the Central Advisory Water Committee, *Information on Water Resources*, published in February 1959, proposed that steps should be taken to review current research work and to determine how such work should be co-ordinated. The sub-committee recommended certain extensions of existing facilities for recording rainfall, snowfall and underground water and for measuring river flows.

Water Pollution Research

The Water Pollution Research Laboratory of the Department of Scientific and Industrial Research is engaged in investigating problems connected with the treatment of water for domestic and industrial supply, the treatment and disposal of sewage and industrial waste water, and the effects and prevention of pollution of surface water and underground water. The laboratory maintains close contact with other interested Government departments, with municipal and other public authorities and with industry. Research is carried out with general supervision and advice from the Water Pollution Research Board of the Department of Scientific and Industrial Research. The board was set up in 1927 and its members are appointed by the Lord President of the Council.

The Central Advisory Water Committee has appointed a sub-committee to consider problems arising out of the disposal of trade effluents, and it has also a standing technical committee concerned with the effects of the discharge of water containing synthetic detergents (for instance, persistent foaming) into rivers, canals and sewerage works. In its first progress report, published in February 1958, the standing committee noted that the consumption of surface-active agents, on which detergents are based, increased very little in 1955 and 1956 (average increase 2.5 per cent) compared with the years 1951-54 (average increase 30.6 per cent). It appeared, therefore, that the home market had almost reached the limit of consumption under present conditions, and that existing conditions were unlikely to change significantly.

BUILDING AND CONTRACTING

The building and contracting industry is concerned primarily with the construction and repair of houses, hospitals, schools, offices, shops and factories, and with civil engineering works such as bridges, docks, harbours, railways, roads, airports, power stations, hydro-electric schemes, irrigation systems and atomic energy establishments. The industry employs some 1,400,000 persons (including about 70,000 women) and provides over 6 per cent of the gross domestic output of goods and services. It also makes an important contribution to overseas development.

Structure

Over four-fifths of the industry is in the hands of private concerns. The typical firm is small or medium-sized. Over 30 per cent of the firms in the industry are one-man businesses engaged in such trades as house painting or plumbing, and nearly 60 per cent employ fewer than nineteen persons. At the other end of the scale there are fewer than a dozen firms of building and civil engineering contractors, each employing more than 5,000 persons on its permanent staff. Some of these are integrated concerns owning quarries as well as workshops, extensive stocks of mechanical plant, and the standard stores and tackle of builders' yards: they also undertake large-scale constructional contracts overseas.

There are also about 200 United Kingdom firms of consulting engineers which undertake detailed investigations of constructional projects, report on the type of work recommended and materials required, provide estimates of the time and cost of construction, obtain competitive tenders from contracting firms and supervise the carrying out of the work by the contractor.

In addition, there are hundreds of firms of architects and quantity surveyors which are concerned with the design, planning and costing of building and civil engineering projects.

A growing proportion of construction work, in Britain and overseas, is being undertaken by 'consortia', i.e. organisations in which several firms group together to secure large contracts—such as the building of nuclear power stations (see p. 331)—which are beyond the technical or financial resources of a single firm. One example is the consortium of 13 firms engaged in manufacture or construction, set up to build a steel works at Durgapur, India, which will have an annual capacity of 1½ million tons.

Value of Output

The value of the annual output of the industry has been rising fairly steadily since 1945, and the total for Great Britain in 1958 is estimated to amount to £2,168 million. Of this total, £348 million represented building work carried out by the staffs employed directly by the public authorities (including Government departments, local authorities and certain public utilities), while the balance of £1,820 million represented the output of private firms (new work, £1,405 million, and other work, £415 million).

Housing Construction

In the post-war period most new houses in Britain have been built by private firms working under contract to local authorities, but the proportion built by private firms for private owners has increased appreciably since 1951. About 15 per cent of local authorities employ direct labour in housing construction, while about 64 per cent use their own labour for repair and maintenance. In 1958, the value of new housing built in Great Britain by private firms was £518 million, of which £264 million was for private owners and £254 million for public authorities.

Between 1945 and 1958, some 3,190,000 new permanent houses and other dwellings and some 160,000 temporary houses were built in the United Kingdom.

Prefabricated Buildings

Prefabrication is generally taken to mean factory production of most of the component parts of buildings for transport to, and rapid erection on, a site. Techniques of prefabrication have been developed in Britain over a period of at least 150 years. A notable early example was the Crystal Palace, originally erected in Hyde Park, London, from component parts made in Birmingham, for the Great Exhibition of 1851.

Considerable advances in technology were made during the second world war when greater use was made of lightweight materials, including aluminium alloys, light strip steel and asbestos cement panels. In the earlier post-war years, prefabrication techniques were used extensively in the construction of temporary houses; by 1949, 156,000 temporary houses had been provided by the Ministry of Works for erection on sites made available by local authorities. These new techniques are also used in the construction of permanent houses, and are being developed and applied in the building of schools, hospitals, offices and shops.

The industry has made useful contributions to the post-war need for houses and other forms of accommodation overseas. In 1958, exports of prefabricated buildings were valued at £5.8 million.

Civil Engineering and Industrial Building

Britain was the first country to develop civil engineering as a large-scale modern industry and the first to provide techniques, finance and equipment to carry out major civil engineering projects throughout the world. Prominent figures in the early development of civil engineering included: James Brindley (1716-1772), builder of canals; John Loudon McAdam (1756-1836), pioneer in road construction; Thomas Telford (1757-1834), builder of roads, docks and bridges; and George Stephenson (1781-1848), Robert Stephenson (1803-1859), Joseph Locke (1805-1860), Isambard Kingdom Brunel (1806-1859) and Thomas Brassey (1805-1870), builders of railways.

Within the United Kingdom the industry has been occupied since the war with large-scale reconstruction and development schemes. These have included work on the repair, modernisation and electrification of railways, road and dock development schemes, airports, sea defence works, thermo-electric and hydro-electric power stations, improved water supplies, and drainage and sewerage systems.

Among the important civil engineering projects under construction in the United Kingdom in 1959, were the Whiteinch Tunnel, under the river Clyde at Glasgow; the Dartford-Purfleet Tunnel under the Thames; the road bridge over the Firth of Forth; and a 5 million ton capacity oil refinery at Milford Haven. Some £55-£65 million is being spent annually on new motorways and road reorganisation (see pp. 370-71). Investment programmes of the nationalised industries in coal, hydro-electric development, nuclear power stations and rail transport also involve building and contracting work on a large scale.

In Great Britain since the war, more than 18,000 industrial buildings of over 5,000 sq. ft. (with a total area of over 400 million sq. ft.) and many smaller factories have been erected.

Output in Northern Ireland

Developments in the building and civil engineering industries in Northern Ireland have followed much the same pattern as in Great Britain.

The output of these industries has been relatively higher in Northern Ireland since 1946 than before the war, as considerable leeway had to be made up. Progress has been particularly marked in housing, hospitals and schools, water supply and sewerage, arterial drainage and harbour schemes. An extensive programme of factory construction has been under way since 1947 with the object of attracting new industries to Northern Ireland.

Overseas Constructional Work

Constructional work carried out overseas by British firms has included railways in most parts of the world; large-scale irrigation works in India, Pakistan, Egypt and Greece; and canals, roads, docks, harbours, power stations, airfields, hydro-electric schemes and industrial and housing estates in several countries. British conditions of contract for international civil engineering work have been widely adopted as standard throughout the world.

Examples of large contracts in recent years include: hydro-electric schemes at Owen Falls (Uganda), and Hirfanli (Turkey); dock extensions at Calcutta and Bombay (India); harbour works at Takoradi and Tema (Ghana), and Aden (one of the largest bunkering stations for oil in the world); a new port at Salaverry (Peru); thermal power stations at Pretoria and Johannesburg (South Africa); a geothermal power station at Wairakei (New Zealand); dry docks at Karachi (Pakistan); houses, airfields, roads and bridges in Iraq; modernisation of the trunk road system in Iran; and industrial estate development in Annacis Island (Canada); 12-storey office blocks in Toronto (Canada); irrigation schemes for sugar and citrus estates in Southern Rhodesia; an oil refinery at Rio de Janeiro (Brazil); a pharmaceutical products factory in Iran; the Auckland harbour bridge (New Zealand), opened in May 1959; the Adomi bridge across the river Volta (Ghana); and a mile-long road bridge costing £5½ million over the river Niger (Nigeria).

It has been estimated that the value of work done during the year ended March 1959 by some 63 principal British building and civil engineering firms, operating in some 66 countries, was over £120 million, compared with £114 million in the previous year; and the value of contracts obtained rose from £102 million in 1956-57 to £115 million in 1958-59. Most of the work done was in the sterling area, although about 22 per cent was in the dollar area.

Among the major projects on which British consulting engineers have been engaged in recent years are the hydro-electric scheme at Kariba and the power development, irrigation and flood control project in Shire Valley (both in the Federation of Rhodesia and Nyasaland), the Kai Tak airport at Hong Kong, and the trans-Iranian pipe line survey.

Research and Development

Research into various aspects of civil engineering is undertaken by the Department of Scientific and Industrial Research (DSIR), the Admiralty, various universities and technical colleges, and by individual firms and trade associations.

The civil engineering research work of DSIR is carried out through several research laboratories, including the National Physical Laboratory, the Building Research Station, the Road Research Laboratory, the Forest Products Research Laboratory, the Geological Survey and Museum, the Water Pollution Research Laboratory, the Fire Research Station and the Hydraulics Research Station.

One notable example of this work is the research conducted during the past twenty years on concrete manufacture by the Building Research Station and the Road Research Laboratory in conjunction with United Kingdom universities and the Cement and Concrete Association. Another is the research carried out at the

National Physical Laboratory into the effect of wind-pressure on bridges. This work has been in progress since 1946, with the aid of wind-tunnels for the scale models, and led to the discovery of two types of aerodynamic instability—an up and down motion of the whole platform and oscillations of a twisting character. Methods were evolved to modify or eliminate this instability. At the Imperial College of Science and Technology, London, important research has been carried out to discover the manner in which waves exert shock pressure on walls—a matter of considerable importance to civil engineers, especially for maritime structures.

The principal professional body in the civil engineering industry is the Institution of Civil Engineers, incorporated in 1828 by Royal Charter.

Some major advances in technology and materials have been made in recent years, for example, in the mechanisation of earth excavating and site clearance, the development of mobile hoists, improvements in road-making techniques, new methods of welding, the introduction of unit construction processes for bridge building, and progress in concrete mixing and prefabrication.

MANUFACTURING INDUSTRIES

The United Kingdom's manufacturing industries provide an exceedingly wide range of products many of which play a major role in world trade. In terms of net output and exports the most important groups of industries are those concerned with the manufacture of metals and metal products, though the textile and chemical industries are also of considerable significance. Some impression of the relative importance of the different groups in terms of the value of net output is given in Table 22, which is based on the results of the Census of Production for 1956 and the provisional results of a sample census for 1957.

TABLE 22
VALUE OF NET OUTPUT OF INDUSTRY GROUPS IN 1956 AND 1957

	1956	1957 (a)	
	£ million	Percentage of total	
Metal manufacture	662.3	682.9	9.1
Shipbuilding, engineering and electrical goods	1,743.3	1,859.7	24.8
Vehicles	811.0	828.1	11.0
Miscellaneous metal products	405.7	413.6	5.5
Chemicals and allied trades	614.6	656.2	8.5
Textiles and clothing	926.8	961.1	12.9
Food, drink and tobacco	680.3	699.9	9.3
Other manufacturing industries	1,335.5	1,433.7	18.9
TOTALS	7,179.5	7,535.2	100.0

Source: *Board of Trade Journal*.

(a) Provisional figures. The final total, published in advance of complete figures, is £7,535.04 million.

The pattern of manufacturing industry has changed markedly in response to technological progress, new demands from home and export markets and the introduction of new and improved materials. The rate of expansion has been especially rapid in electronics and in most sections of electrical engineering, in almost all branches of the chemical industry and in the aircraft and motor vehicle industries.

Expansion has been particularly marked in those industries which are in a position to make use of automation equipment, for example, transfer machines, the linking of machine tools in automatic production lines, the use of electronic control equipment and electronic data processing machines. In several industries, such as oil refining, steel making, motor vehicles, electronic components and chemicals, automation is being adapted on a wide scale.

METAL MANUFACTURE

The metal manufacturing industries employed about 550,000 persons at the end of 1958. Nearly four-fifths of these were engaged in the iron and steel industry.

Iron and Steel

Britain pioneered the application of coal to the smelting of iron ore from the seventeenth century onwards and British inventors were responsible for the series of discoveries which led to the great expansion of steelmaking in the second half of the nineteenth century. Today, Britain is one of the world's four largest producers of steel and is renowned for the quality of its special and alloy steels. Production of crude steel, which in 1946 totalled 12.7 million ingot tons, rose to 21.7 million ingot tons in 1957, falling back to 19.3 million ingot tons in 1958; capacity is available to produce about 24.5 million ingot tons. Pig iron production has risen from 7.8 million tons in 1946 to 14.3 million tons in 1957; output in 1958 was 13 million tons. In 1958, direct exports of iron and steel amounted to 3.4 million ingot tons valued at £188 million, in addition to indirect exports, estimated in 1958 to amount to the equivalent of 4.2 million ingot tons, in the form of sales by the steel-consuming industries; exports of the machinery industry (other than electrical machinery), and of the shipbuilding and vehicle industries, which are major consumers of steel, were valued at over £1,000 million in 1958.

South Wales and the north-east coast of England are the United Kingdom's two largest steel-producing areas, together responsible for an annual crude steel production of nearly 9.5 million ingot tons, or more than 40 per cent of the total output. South Wales is engaged mainly in the production of flat products, and is especially noted for tinplate. In the north-east coast area of England, production is concentrated on heavy sections and rails, and plates for the shipbuilding industry. Scotland, with an annual production of over 2 million ingot tons, finds its chief internal markets in the shipbuilding and engineering industries of the Clyde valley. Sheffield is known throughout the world for its special alloy steels. Two other areas with a substantial share of output are north Lincolnshire and Lancashire. Britain possesses some of the most up-to-date steel plants in Europe; for example, the £18 million universal beam mill near Middlesbrough, in the north-east of Yorkshire, for the production of structural steel which came into operation in 1958, the steelworks at Ravenscraig near Motherwell, Scotland, completed in 1957 at a cost of £22.5 million, and the integrated strip mill at Margam in South Wales.

The iron and steel industry has been subject to some form of public supervision since 1932, when a Government-appointed body, the Import Duties Advisory Committee, gave special attention to the reorganisation of the industry. In

February 1951, the greater part of the industry came under public ownership by virtue of the Iron and Steel Act, 1949. The 1949 Act was repealed by the Iron and Steel Act, 1953, which established an Iron and Steel Holding and Realisation Agency with the duty of returning the companies, which had continued to operate as separate units, to private ownership. By September 1958, there remained 13 companies, of which two are major companies, in which the agency had direct holdings.

The 1953 Act also provided for the establishment of the Iron and Steel Board to exercise a general supervision over the iron and steel industry. The board is responsible to the Minister of Power and includes, in addition to the chairman and two other full-time members, a number of part-time members drawn from steel producers, steel consumers and trade unions. The representative trade association of the industry is the British Iron and Steel Federation.

Since 1945, modernisation and development on a large scale have been undertaken; in 1958, investment expenditures were £105 million, compared with £75 million in 1956. It is planned to raise productive capacity for crude steel to nearly 28 million ingot tons by 1962, of which 5 million ingot tons are expected to be required for export. Plans in hand for expansion and further modernisation of the industry, ranging from iron ore mining to finishing capacity, are estimated to cost £650 million. Two new steel strip mills, which are to be constructed in Wales and Scotland with financial aid from the Government, will increase steel strip capacity by 1 million tons to 4.7 million tons by 1962. The industry plans to increase its consumption of home-produced ore from nearly 15 million tons in 1958 to 22 million tons by 1962, and that of foreign ores from nearly 13 million tons (in 1957, nearly 16 million tons) to between 22 and 24 million tons. The industry's long-term programme provides for a fleet of 72 special ore carriers; 37 were in service at the end of 1958.

Some 325,000 people were employed in 1958 in iron and steel manufacture (excluding iron foundries). Of these, 223,000 were engaged in iron and steel smelting and rolling, and 23,000 in blast furnaces.

Iron Founding

Iron castings are required by most branches of the engineering industry, and especially in the manufacture of motor vehicles, tractors, machine tools and power units of all kinds; they are also used by the building industry. There are some 1,800 firms in the industry, ranging from small units to foundries employing over 1,500 people. About 125,000 people are employed, including 15,000 in foundries run by engineering firms. Iron foundries are found in all parts of the United Kingdom, but there is some concentration in the Midlands and other engineering centres.

Output of iron in castings fell back to 3.47 million tons in 1958 (compared with 3.93 million tons in the peak year of 1955), as a result of a reduced demand in some trades. Over half a million tons each are used annually by the motor vehicle industry, by the machinery, general engineering and electrical engineering industries, and for pressure pipes; about 400,000 tons are required by the building industry.

The British Cast Iron Research Association undertakes basic research into iron technology. It was responsible for the development of one form of spheroidal graphite (SG) cast iron, which has made possible in recent years the production of a range of castings not previously available.

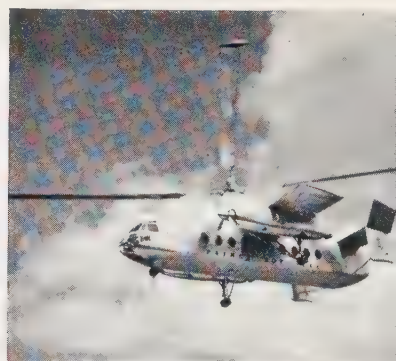
Non-ferrous Metals

The non-ferrous metals industry in Britain, employing some 113,000 persons, is the largest in Europe and, in 1957, contributed over £125 million to the net national output.

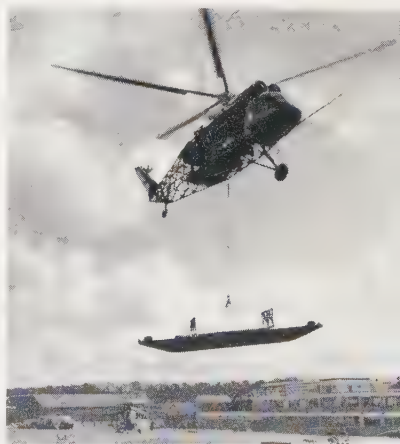
The Vickers
Vanguard
turbo-prop
airliner
carries up to
139 passengers
and cruises
at 425 m.p.h.



Above: Short SC1 vertical take-off research aircraft: it has four Rolls-Royce jet engines for downward thrust and a horizontal engine in the tail.



Right: The Fairey Rotodyne vertical take-off airliner (*above*) and the Westland Westminster heavy-duty helicopter (see p. 383).



Below: The Armstrong Whitworth Argosy can carry 13½ tons of freight or 80 passengers.





The first British-built mobile oil-drilling platform; to be used off British Borneo.

The *Acrow* jet dredger uses powerful jets of water to loosen materials.



Vickers *Vigor* tractor engaged in road-making in Malaya.

The *Rapier W1400* walking dragline, probably the largest in the world, is used in iron-ore mining. Its tubular steel jib is 282 feet long.



Nowadays the mining in Britain of non-ferrous ores is confined to the working of lead, zinc, tin and tungsten ores on a small scale. However, the United Kingdom is a large consumer of non-ferrous metals, being second only to the United States among Western countries in its consumption of aluminium, copper, lead, tin and zinc. Production in 1958 included the following: aluminium, 26,000 tons of virgin metal and 100,000 tons of secondary metal; refined copper, 98,000 tons of virgin copper and 95,000 tons of secondary metal; lead, 81,000 tons of refined metal; zinc, 75,000 tons of slab metal; and tin, 33,000 tons. In almost every case, output in 1958 was well below the peak level of previous years.

The industry, nearly half of which is situated in the Midlands, consists mainly of factories for smelting, casting and fabrication by rolling, extrusion and drawing of the metals mentioned above and of nickel and magnesium. The techniques of powder metallurgy and pressure diecasting are also employed where appropriate. Some of the non-ferrous metals such as nickel, molybdenum and tungsten are largely used in steel alloys. New uses for non-ferrous metals with special properties have emerged with the growth of new industries having their own particular requirements, as, for example, production of nuclear energy (uranium, zirconium, beryllium), jet aircraft (niobium, magnesium, titanium) and electronic apparatus (selenium, silicon, tungsten, germanium, tantalum).

In 1958, direct exports of non-ferrous base metals (including semi-fabricated products) were valued at £93 million, of which copper and its alloys accounted for £55 million, aluminium and its alloys for £12 million and nickel for £12 million. In addition, there was a further substantial export of non-ferrous metals in many fabricated forms.

SHIPBUILDING, SHIP REPAIRING AND MARINE ENGINEERING

Britain has for centuries been one of the most important shipbuilding countries. Modern shipbuilding dates from the middle of the nineteenth century, when the iron-clad steam-driven vessel replaced the earlier sailing ship. Britain led the way in the substitution of steel for iron and in the development of the steam turbine. Between 1890 and 1913 Britain produced more than half the world's new tonnage, and in 1920 launched over two million tons, still the peace-time record for the industry. In the inter-war years the problem of surplus capacity, common to all shipbuilding countries, caused a substantial fall in activity and periodic heavy unemployment. During the second world war the industry was fully occupied in building and repairing warships and merchant ships and a high level of activity in the building and repair of merchant ships has been maintained since 1945. At the end of June 1959, however, the order books of the shipyards, which totalled 4.7 million tons, showed a decline of some 2½ million tons during the past two years.

Well over three-quarters of the tonnage of ships built in the United Kingdom comes from four areas:

1. On the river Clyde in Scotland (where the *Queen Mary* and *Queen Elizabeth*, the world's largest ships, were built in the inter-war years).
2. On the north-east coast of England—along the lower reaches of the rivers Tyne, Wear and Tees, and at West Hartlepool, and Blyth.
3. On the north-west coast of England—on the river Mersey, and at Barrow-in-Furness, where the *Oriana* (see p. 355) was due to be launched in November 1959.
4. At Belfast, in Northern Ireland, where the largest individual shipyard is situated. A 45,000-ton luxury liner of revolutionary design, the *Canberra*, the largest passenger vessel to be built in Britain since the *Queen Elizabeth*, is under construction at Belfast for the P. and O. Company.

In each of these areas there is capacity for building warships and all types of merchant ships from large passenger liners and tankers to small sea-going ships such as coasters and cross-Channel steamers. Ships are also built in the Southampton area, in the Isle of Wight, and along the estuaries of the rivers Forth and Tay, in Scotland, while numerous places along the coast build fishing vessels, yachts, harbour craft and barges. Repair yards and dry docks are situated in all the great ports. The majority of the fourteen largest firms engaged in repair work also carry on shipbuilding work. The recession in shipping in 1958 and 1959 led to reduced activity in ship repairing, and the numbers employed fell to about 64,000 by February 1959.

In 1958, there were about 215,000 persons employed in the shipbuilding and ship repairing industries, including those employed in naval dockyards, and about 87,000 in marine engineering.

Between 1945 and 1958, British shipyards launched nearly 17 million gross tons of shipping, including more than 4 million gross tons for foreign owners.

Output had been held back on account of shortages of steel, skilled labour and components, and launchings in 1958, at approximately 1.4 million gross tons, did not represent the industry's full capacity. Of the ships launched in 1958, 41 per cent were oil tankers and about 24 per cent were for overseas. The value of exports of ships and boats in 1958 totalled £63 million. Orders held by United Kingdom shipyards at the end of 1958 amounted to over 5½ million gross tons; 2.1 million gross tons were under construction.

Over the past twenty years, traditional methods of shipbuilding have undergone radical changes, primarily due to advances in welding technique. These have led to the production of ships in large units, 50 to 60 tons in weight, prefabricated under cover and rapidly assembled for launching. The industry is spending large sums on the modernisation and mechanisation of shipyards; £50 million was invested in the period 1946-57 and it is planned to spend about £70 million in the following five years, including the construction of berths for the building of tankers of up to 100,000 gross tons.

The British Shipbuilding Research Association (BSRA) is engaged in all aspects of shipbuilding research, and the Parsons and Marine Engineering Turbine Research and Development Association (Pametrada) are developing gas turbines and improving the efficiency of diesel and steam units. The Atomic Energy Authority and private nuclear and marine engineering groups submitted plans in 1959 to the Admiralty for nuclear reactors to be used in the propulsion of merchant ships, especially large tankers.

MECHANICAL ENGINEERING

Mechanical engineering comprises a very wide range of industries, including agricultural machinery, boilers and boilerhouse plant, machine tools, stationary engines, textile machinery and accessories, ordnance and small arms, fabricated steelwork, office machinery, cranes, conveyors and mechanical handling plant. The total number of persons employed in mechanical engineering in 1958 was about 1,100,000, and the value of exports in 1958 exceeded £550 million.

Agricultural Machinery and Tractors

The agricultural machinery industry employs about 55,000 people and, in 1958, its annual output, including both machinery and tractors, was valued at £142 million. Britain has some of the most up-to-date tractor manufacturing plants in the world, and production is chiefly in the hands of firms in, or closely associated

with, the motor vehicle industry. In 1958, production of tractors, almost all of which were diesel-powered, totalled 186,300, and exports amounted to 107,000, making the United Kingdom the world's second largest exporter and producer.

Agricultural machinery and implements are manufactured in several areas, with some concentration in Lincolnshire, East Anglia, and the north of England. In 1958, 6,550 combine harvesters and 27,800 mouldboard ploughs were produced, but the largest expansion was in output of pick-up balers which totalled 13,560, an increase of 70 per cent over 1957.

Exports of agricultural machinery and tractors in 1958 totalled £91.5 million—a record; of this total, £55.3 million was accounted for by tractors, £17.9 million by tractor parts and £16.7 million by machinery and implements. Although Commonwealth countries are the largest markets, a considerable proportion of exports go to Scandinavian countries and other parts of Europe.

Metal-Working Machine Tools

Britain was the birthplace of the machine tool industry, and by the early 1830s had developed to an advanced stage the boring machine and screw cutting lathe, as well as other machine tools. The industry's output today ranges from transfer lines for motor vehicle manufacture to electronically controlled machine tools giving accuracies of one ten-thousandth part of an inch.

There are over 300 separate firms making machine tools, but the greater part of the industry's output comes from about 120 firms. The high degree of specialisation makes it possible for the small firm to flourish. About 45,000 workers are employed. The industry is centred mainly in the Midlands, Yorkshire and Lancashire, and to a lesser extent near London and Glasgow. The Machine Tool Trades Association of Great Britain is the representative body of most of the machine tool manufacturers and importers and is responsible for the International Machine Tool Exhibitions held in Britain every four years; the next exhibition is due to take place in 1960.

The value of deliveries of metal-working machine tools has risen from £6 million in 1935 to £95 million in 1957; in 1958 it was £84 million. Deliveries for export in 1958 amounted to £20.4 million, while orders on hand at the end of 1958 totalled nearly £56 million, of which nearly 30 per cent was for export.

Substantial expenditures on plant and buildings have been made in recent years; it is estimated that the value of the capital employed in the industry trebled between 1948 and 1957, and about £9 million is being spent on research and development in the three years ending in 1960.

Industrial Engines

United Kingdom manufacturers have a world-wide reputation for small marine and industrial internal combustion engines, in particular for lightweight diesel engines. The value of deliveries of industrial engines, including small marine engines, rose from £27 million in 1948 to the record level of over £50 million in 1956. In 1958, 352,000 engines valued at nearly £49 million were delivered, including about £20 million for export. Production of parts and accessories accounted for a further £15 million.

Textile Machinery

One of the oldest of Britain's mechanical engineering industries is the textile machinery industry which developed rapidly after the introduction of mechanical spinning and weaving towards the end of the eighteenth century. The industry now gives employment to about 55,000 people and comprises about 450 firms, situated largely in Lancashire, Yorkshire, Northern Ireland, Dundee, Leicester and

Nottingham, making every kind of machine and accessory for the manufacture and processing of yarns and fabrics from all types of natural and man-made fibres, including bast and leaf fibre machinery of which the United Kingdom is still by far the world's largest supplier.

The industry enjoys a world-wide reputation, not only for the high quality of its products but also because it offers a complete and modern range of equipment consisting of: spinning machinery, including machinery for all the preparatory processes; winding machinery and machinery for other processes prior to weaving; weaving machinery; knitting, hosiery and lace machinery; printing, dyeing and other finishing machinery; and all types of mill stores and textile machinery accessories. In 1958, deliveries (including accessories) totalled £64 million. Exports were valued at £40 million, or about two-thirds of total deliveries.

Contractors' Plant and Quarrying Machinery

Production of contractors' plant in the United Kingdom before the second world war was mainly concerned with small excavators, concrete mixing machinery and road surfacing plant, including road rollers. But today many new machines, especially machinery for earth-moving, are in production; examples are crawler tractors, motor graders, scrapers, trenchers, dozer equipment, dumpers, rippers and rooters.

Whereas output in 1935 was valued at only £2 million, in 1958 it reached nearly £80 million, of which two-fifths was for export. The most important items were earth-moving machinery, about 30 per cent of the total value, and excavators and parts (about one-quarter of the total). Excavators are the largest single export product by value.

Office Machinery

The United Kingdom office machinery industry is now second in size only to that of the United States, and since 1946 has expanded at a remarkable rate. In 1958, the value of deliveries of office machinery (such as accounting machinery, punched-card machinery and some types of electronic computers, typewriters, dictating machines, and duplicating and copying machinery) was £51.7 million, of which £19 million worth was exported, including £2.5 million worth to Canadian and United States markets (exports of other office equipment, such as office metal furniture and office stationery, were worth about £7.5 million). In 1958, output of portable typewriters, which has increased by 40 per cent since 1955 to 146,000, for the first time exceeded that of standard machines (133,000); more than half the typewriters manufactured are for overseas, and exports in 1958 were valued at nearly £3.8 million. British subsidiaries or associates of United States firms are prominent in the office machinery industry.

Refrigeration Machinery

The United Kingdom industry makes a wide range of equipment and appliances, extending from refrigerators of varying sizes suitable for domestic and commercial use to industrial refrigeration equipment for cold stores, manufacture of chemicals and other products, ice-making plant and refrigeration plant for ships. Production of commercial and industrial refrigeration machinery was well established before the second world war, but the present large production of domestic refrigerators has been built up since 1946.

The value of the deliveries of refrigeration machinery in 1958 totalled over £44 million, an increase of £10 million above the 1957 total; more than half consisted of domestic refrigerators (which numbered 560,000). Exports were valued at £15 million, and represented about one-third of the output.

Industrial Valves

Industrial valves controlling the movement of liquids and gases are a vital component in many industrial processes, particularly in the chemicals, oil and electric power industries. About 90 per cent of the United Kingdom production is made by 63 firms, mainly situated in the Midlands, Glasgow and the north of England; some 15,000 persons are employed in this branch of the engineering industry.

Exports more than doubled between 1949 and 1958, when they were valued at £11.5 million. The United Kingdom ranks second to the United States in world exports of industrial valves, and accounts for about one-fifth of the total.

Boilers and Boilerhouse Plant

Boilers and boilerhouse plant manufactured in the United Kingdom have many industrial applications. Water tube boilers of advanced design and large steam-raising capacity are produced by the industry for home power stations and for export. Firms in the industry are members of the groups formed for the purpose of building nuclear power stations, both in the United Kingdom and overseas. Shell boilers are used for steam raising and heating purposes in factories and in buildings. Items of steam-raising plant accessories produced include plain and corrugated boiler furnaces, forced draught boiler furnaces and grates, stokers, fuel economisers and preheaters, superheaters and desuperheaters, pulverisers, coal and ash handling plant, soot blower equipment, steam pipework, and feed water heaters. The total number of people employed in the industry is about 36,000.

In 1958, production of shell boilers and boilerhouse plant, much of which is used in the construction of complete installations, was valued at £26 million, and production of water tube boiler installations at £61 million. Exports in the same year were valued at £18.5 million, of which £8.9 million was accounted for by water tube boilers. India took nearly one-fifth of total exports.

Nuclear Power Station Plant

The design and construction of nuclear power stations is one of the outstanding present-day enterprises of British industry. Five major groups of firms have been formed for this purpose, consisting of leading firms in the heavy electrical engineering, civil engineering, boiler, instrument, and associated industries. In addition to the nuclear power stations being built for the United Kingdom electricity authorities, these groups are undertaking export orders for such stations in Italy and Japan. Design teams from the companies concerned have been trained by the United Kingdom Atomic Energy Authority (UKAEA) in the design of gas-cooled graphite-moderated reactors, and the authority grants them non-exclusive manufacturing licences and keeps them informed of the results of further research and development work. Industrial firms themselves are also engaged on research into a range of problems relating to nuclear energy.

Other concerns have also joined together to carry out research into nuclear developments and to supply nuclear power plant. Two have arrangements with United States firms to supply 'package' type reactors designed to serve less developed countries. Others, in collaboration with the UKAEA, are studying further possible applications of nuclear power, for example marine propulsion. Companies have also been established for the manufacture, machining and preparation of graphite for use in reactors. The services of United Kingdom firms of consulting engineers are being utilised for specification planning, inspection and advice.

The Nuclear Energy Trade Associations' Conference (NETAC) was formed towards the end of 1956 to establish a permanent means of liaison and to pool more

effectively the experience of nuclear development among the firms and trade associations concerned.

Steelworks Plant

As a major steel-producing country, Britain has an expanding industry for the manufacture of steelworks plant. Up to 1939, production fell considerably short of internal requirements. The post-war modernisation and expansion of the United Kingdom steel industry have led to the rapid development of the steelworks plant industry, which today provides about nine-tenths of Britain's requirements for steel-making equipment and can supply complete plant as efficient and economical in operation as any in the world.

Some 40 firms produce equipment for making steel in all its stages. In 1945, six of these firms, together capable of supplying the entire range of steel-making plant, formed the Metallurgical Equipment Export Company Limited (MEECO) to co-ordinate export operations and to facilitate the placing of foreign orders in the United Kingdom for complete steelworks. This group of firms has carried out a number of large contracts for equipping steelworks in Sweden, Norway, Spain and France. It forms part of the consortium of engineering firms constructing the £100 million steel plant at Durgapur, in India.

The value of deliveries of steel and non-ferrous metal works plant, including rolling mills, amounted in 1958 to some £50 million, of which about one-quarter was for export.

Petroleum Equipment

Before the second world war, the production of specialised equipment for the oil industry was on a small scale, but the rapid expansion in oil production and refining throughout the world has given rise to a substantial export business in British fittings and plant. In 1958, British firms within a number of industries received orders for oil equipment and materials (excluding tankers) for the home and export market to the value of about £122 million; these included orders for tubes, pipe-fittings and valves (£15 million), specialised drilling and production equipment (£10.4 million), tools and machinery (£9.1 million) and electrical equipment (£8.6 million). Britain ranks second to the United States as a supplier of equipment for the petroleum industry.

Chemical Plant

Some 225 firms are engaged in the highly specialised chemical engineering industry, which designs and supplies all types of plant and equipment for use in the manufacture of chemicals. The range of activities includes the manufacture of distillation columns, heat exchangers, high vacuum drying equipment, and plants for the manufacture of fertilisers, petroleum chemicals, sulphuric acid and other basic chemicals. The value of deliveries of chemical plant in 1958 was about £50 million.

Scientific and Industrial Instruments

Scientific instruments have been made commercially in Britain for over three centuries, early products being chiefly navigational and optical instruments. The last twenty years have brought a large-scale expansion of capacity in every branch of the industry to meet the needs of the defence services during the war and, later, the expanding world demand for all types of instruments (optical, mechanical, pneumatic, electrical, electronic and nucleonic), for both pure and applied science. The sector which is expanding most rapidly is that making industrial instruments—

an essential element in the movement towards full automation in industry. British scientific instrument manufacturers can supply all types of instrumentation for research, and any form of control or automatic device.

The Scientific Instruments Manufacturers' Association estimates that the annual turnover of all types of scientific and industrial measuring instruments is about £70 million a year, of which about one-quarter is exported. Aeronautical instruments are the largest export group, exceeding £2 million in 1958. Some 50,000 people are employed in the industry.

Clocks and Watches

Britain was at one time the world's leading producer of clocks and watches, but, by the end of the nineteenth century, production had virtually died out. The present industry is largely a post-war development. It employs about 17,000 people, the great majority skilled craftsmen, and many of the factories are located in the Development Areas, and particularly in Scotland. In 1958, 8.8 million clocks, watches and time switches, including 2.3 million watches and over 3.5 million mechanical alarm clocks, were produced, with a total value of £11.7 million. Exports were valued at about £2 million.

ELECTRICAL ENGINEERING

The United Kingdom electrical engineering industry is engaged in the manufacture and installation of a wide variety of electrical equipment, ranging from giant generators to domestic appliances and the smallest components of radio sets. The total value of its output has risen from about £155 million in 1938 to nearly £1,300 million in 1958. It exports large quantities of power station equipment and other electrical machinery and appliances to all parts of the world. In terms of monetary value it is one of the two largest exporters of electrical goods in the world, and sends overseas about a quarter of the value of its output, as compared with less than one-eighth in the immediate pre-war period. The value of exports in 1958 totalled £276 million, compared with the record level of £279 million in 1957. In the five years, 1954-58, the value of the industry's exports amounted to about £1,300 million, more than one-sixth going to European countries.

Altogether the industry employs a labour force of more than 730,000, including over 210,000 engaged in the manufacture of electrical machinery, over 140,000 in the production of radio and other electronic equipment and gramophones, and about 54,000 in wireless valves and electric lamps.

Heavy Electrical Plant

British scientists and engineers have been responsible for many of the basic advances in the generation and transmission of electricity power. The experiments of Michael Faraday pointed the way to the production of electricity as a source of cheap and abundant power; Sir Charles Parsons produced and patented the first turbo-dynamo, the forerunner of the giant turbo-generating sets of today. The industry has provided the plant required for the large-scale post-war expansion programme of the United Kingdom electricity authorities, and has built all types of equipment for overseas countries, including the United States. In order to meet the growing volume of orders, extensions to capacity have been carried out by the principal manufacturers. Manufacture takes place in many areas, among the most important being Manchester, Rugby, Tyneside, and Stafford. Among the orders on hand are a 275,000 kilowatt (kW) generating set for commissioning in 1962 and one of 550,000 kW in 1963.

In 1958, more than 1.13 million kW of steam turbine plant of 10,000 kW and over was exported, an increase of about one-quarter on the 1957 export total; it was

also a record year for output of hydraulic turbines and the total capacity of deliveries exceeded 1.03 million b.h.p., almost all of which was for export. The value of exports of electrical machinery in 1958 totalled £70 million, and included £34.5 million worth of generating sets, generators and motors, £17.4 million worth of switchgear, and £12.6 million worth of transformers.

Radio and Other Electronic Apparatus

Production of electronic equipment is one of the most rapidly expanding of Britain's industries. United Kingdom scientists and inventors have made many basic contributions to electronics—the thermionic valve, the development of radar (a British firm has fitted nearly half the world's radar-equipped ocean-going ships), the first public transmission television service, and the 'printed circuit' which has led to far-reaching changes in methods of production in the radio industry. The volume of the industry's output is estimated to have risen by about 40 per cent between 1953 and 1958. Its range of activities extends from consumer articles, such as television and radio sets, and sound reproduction equipment, to complex industrial equipment, including machine tool controls, radio and television transmitters (British companies have equipped television transmission systems throughout the world), air and marine navigation aids, nucleonic control instruments and data processing machines. There are nineteen manufacturers producing some 600 different types of transistors and semi-conductor devices, and some 25 million units are expected to be manufactured in 1959–60.

The electronics industry has no separate statistical identity, but it is estimated that over 200,000 people are employed in the industry (including telecommunications), and that the value of its gross output in 1958 exceeded £350 million. In that year, production included 1,950 million electronic components (worth over £100 million), slightly fewer than 2 million television sets, and 1.78 million radio sets and radiograms.

The value of exports (including telecommunication equipment) reached the record level of £46.5 million in 1958 and, in recent years, exports of capital equipment (for example, marine and air navigation aids) have tended to expand faster than consumer products. In the same year, exports of navigational aid equipment were worth £14.5 million, exports of electronic valves and cathode ray tubes over £5 million, and those of sound-reproducing equipment and accessories were valued at £11 million. The largest market is the Netherlands. Indirect exports in the form of equipment in other products, for example in aircraft, ships and machinery, are also considerable.

Insulated Wires and Cables

This industry is concerned with the manufacture of cables and wires (including submarine cables) for the distribution of electric power, for the telephone and telegraph network and for many other purposes.

In 1958, workers employed in the industry totalled about 59,000. As a result of recent amalgamations, the two largest firms account for about half the total output. The value of deliveries of insulated wires and cables totalled £114 million in 1958. The value of exports between 1954 and 1957 increased by 88 per cent to over £36 million, falling back to £26 million in 1958; in some degree, the fall reflected lower prices.

Domestic Electrical Appliances

There are some 200 firms, many of them small and serving local markets, in the United Kingdom manufacturing a wide range of electrical appliances for use in

the home. The removal of controls on hire-purchase transactions in the autumn of 1958 and reductions in purchase tax in the Budgets of 1958 and 1959 gave rise to a sharp expansion in domestic sales. In 1958, deliveries included washing machines (876,000, of which 181,000 were for export), vacuum cleaners (1,340,000, including 205,000 for export), dry-shavers (1,158,000, including 297,000 for export), cookers (340,000) and irons (2,448,000, including 672,000 for export). The annual output is valued at approximately £100 million, of which about one-sixth is exported.

VEHICLES

Of the engineering and allied industries, the vehicles group (comprising motor vehicles, cycles, aircraft and railway vehicles) makes the largest contribution to the export trade (about £503 million in 1958). In 1958, it employed about 1,200,000 people, including 311,000 in the manufacture of motor vehicles and cycles, 250,000 in the manufacture and repair of aircraft, and 150,000 in the manufacture and repair of locomotives, railway carriages and wagons.

Motor Vehicles

In size and value the vehicles industries are headed by the motor vehicles industry, which comprises the manufacture of cars, commercial vehicles and tractors (see pp. 328-9). The industry is located mainly in the Midlands and the London area, but is represented in most regions; it consists of a relatively small number of assembly firms—headed by the 'Big Five' (British Motor Corporation, Ford, Rootes, Standard, and Vauxhall), backed by a large number of specialist engine, body and component manufacturers. It has been estimated that over 50 per cent of the ex-works value of passenger cars consists of components purchased from the latter. The 'Big Five' are responsible for about 90 per cent of the output of complete vehicles of all kinds; the balance of the industry's motor production (other than tractors) consists of heavy commercial vehicles, and sports and other specialist cars, some of which have a large market in overseas countries.

The industry has expanded very rapidly since 1945, and in 1958 produced the record number of 1,052,000 passenger cars, 298,000 commercial goods vehicles (compared with a record of 330,000 in 1955) and 15,000 omnibuses, coaches and trolleybuses. Exports of passenger cars in 1958 were the highest so far reached, 487,000 (including chassis); those of commercial goods vehicles at 112,000 were 28,000 below the 1955 peak, while the 5,775 public service vehicles exported represented an increase of over 50 per cent on 1956 exports. The value of exports of passenger cars totalled £189 million, and that of commercial vehicles £80 million. Exports of spares and replacement parts were valued at nearly £43 million. The largest market for cars was the United States which took some 152,000 cars (slightly less than one-third of total exports), followed by Canada, South Africa and Australia. In the first half of 1959, output of passenger cars had risen to an annual rate of 1,150,000, and car exports to an annual rate of 565,000.

Research is carried out at Lindley, Warwickshire, by the Motor Industry Research Association, an autonomous body founded in 1946 and partly financed by the Department of Scientific and Industrial Research, but mainly by the industry itself. Individual firms also have their own research and development facilities.

Some of the new assembly plants in Britain, electronically controlled and using the minimum of labour, are among the most advanced in the world. Leading motor manufacturers are undertaking expansion plans, most of which were completed by 1958, costing about £150 million; in addition, makers of components and accessories have large projects in hand.

The principal trade association in the industry is the Society of Motor Manufacturers and Traders Limited (SMMT), founded in 1902, which holds a Motor Show annually in London, and a Commercial Motor Exhibition every two years.

Motor Cycles and Pedal Cycles

In 1958, output of motor cycles, including motorised bicycles (mopeds), three-wheeled motor vehicles, and scooters, totalled 144,000, of which 37,000 (compared with 60,000 in 1955) were for shipment overseas, over one-quarter to the United States. The total value of United Kingdom production, including parts and accessories, was about £23 million, and that of exports about £5 million. United Kingdom manufacturers introduced advanced models of scooters and mopeds in 1958, and production, which totalled about 45,000 in 1958, is expected to increase rapidly over the next few years.

Production of pedal cycles is concentrated mainly in two groups of manufacturers. In addition, there are several smaller companies, some of which specialise in particular types such as racing cycles. Output in 1958 totalled 2,160,000, of which some three-fifths were exported. In the peak year of 1955, nearly 3.6 million were manufactured. The value of exports of pedal cycles, parts and accessories in 1958 amounted to £22.5 million; the United States, Nigeria, the Federation of Rhodesia and Nyasaland, and Iran were the largest overseas markets.

The British Cycle and Motor Cycle Industries Association Limited holds an annual exhibition in London, usually in the autumn.

Aircraft

The development of the aircraft industry in the United Kingdom, as in other countries, has been strongly influenced by defence requirements, and at the peak of war-time activity it employed nearly 2 million people as compared with some 35,000 in 1935. Following the adjustments to peace-time conditions, the industry has undergone a further period of marked expansion, with the numbers employed increasing from 162,000 in 1951 to 250,000 in 1958, about 20,000 fewer than in the years 1956 and 1957. The numbers will tend to fall to some extent in the next few years as a result of changes in defence policy. The value of the industry's gross output in 1958 was about £400 million. The industry manufactures a wide range of civil and military aircraft, including gas turbine airliners, supersonic fighters, bombers, freighters, crop-spraying aircraft and helicopters.

Britain's achievements in developing aviation and the aircraft industry have been notable. The science of aerodynamics was founded by Sir George Cayley in the early nineteenth century; more recently, Sir Frank Whittle developed the gas turbine engine aircraft, and its first applications to scheduled airline service were the turbo-jet *Comet* and the turbo-prop *Viscount*, the latter the most successful post-war civil aircraft now in service all over the world; sales have exceeded 400. The larger *Britannia*, which entered into scheduled service in 1957, was the first gas turbine airliner to be used on North Atlantic services and has also been ordered by several overseas airlines. The *Comet 4*, which went into service in 1958, is being used by both British and foreign airlines. The *Vanguard*, a turbo-prop aircraft with exceptionally low operating costs, is due to enter into service with British European Airways (BEA) in 1960. Other new gas turbine aircraft in production in Britain are the Armstrong Whitworth *Argosy* and the Handley Page *Herald*. It is estimated that nearly half the world orders for gas turbine aircraft have been placed with United Kingdom firms. The British Overseas Airways Corporation (BOAC) has ordered the Vickers *VC10* and BEA the de Havilland *DH121*; both aircraft are expected to enter into service by 1964. Britain is also the

largest producer in Europe of rotary wing aircraft, and more than 500 British helicopters are in service in the world. Orders have been placed for the world's first vertical-take-off airliner, the Fairey *Rotodyne*, which made its maiden flight in 1957. The industry has been responsible for many advances in military aviation, including the jet flap (for assisting landing and take-off within a small space), the cartridge-operated ejector seat, and the first experimental machines to be capable of vertical take-off from a normal horizontal position. It is also engaged on the development of guided missiles, some of which have been delivered to the Services.

The British aircraft industry makes an important and growing contribution to export earnings. The record 1958 total of £154.1 million was nearly £88 million higher than in 1955; it included £49.6 million for aero engines and £98.5 million for aircraft and parts. In the first half of 1959, exports (especially of aero engines) showed a further increase to £87.8 million. The largest markets for aircraft were India, Canada, the United States, and Western Germany. Patent and royalty payments from abroad are also important. Licence agreements have been made for fifteen to twenty types of British aero engines to be built abroad, and a number of foreign aircraft have been designed to use British aero engines and equipment.

The representative body of the United Kingdom aircraft industry is the Society of British Aircraft Constructors, founded in 1916. Its annual exhibition and flying display at Farnborough is one of the most important events of its kind.

Besides extensive research work by the industry, research on a substantial scale on problems of aircraft and their engines is carried out by the Ministry of Supply, largely at the Royal Aircraft Establishment and the National Gas Turbine Establishment, both at Farnborough. This work is done in collaboration with the industry and results are made known to manufacturers, who are in close touch with the ministry's establishments. In addition, the National Physical Laboratory undertakes research on aerodynamics.

Railway Vehicles

Britain was the first country to build railways, and British engineers pioneered railway development in most parts of the world.

Locomotive production in the United Kingdom is derived from two separate sources. British Railways own 19 main railway workshops, which are engaged in the production and repair of locomotives and other rolling stock and in the production of miscellaneous railway components exclusively for their own use; private firms build locomotives and carriages and wagons of all types for both home and export markets, some for British Railways.

The industry is organised to meet the conditions resulting from the change-over from steam to other forms of traction by most of the world's railways. British Railways, under their modernisation plans, are to take delivery of 388 main line diesel locomotives, ranging from 800 to 3,300 h.p., in 1959, compared with 83 in 1958.

In 1958, about 70,000 people were employed in making locomotives and 81,000 in making and repairing carriages and wagons. In the same year, only 43 steam locomotives were made by private firms and 62 by British Railways. Of the 689 diesel and diesel-electric locomotives built in 1958 by private firms, 311 were for export; 354 diesels of 275 h.p. and over were built for British Railways by their own workshops and by private firms. In the same year, 4,200 wagons and 2,575 coaching vehicles were built by British Railways and private firms, the latter exporting about 4,000 wagons and 400 coaching vehicles. The total value of exports of railway vehicles in 1958 amounted to £46.3 million.

MISCELLANEOUS METAL PRODUCTS

According to the 1954 Census of Production, the group of industries falling within this classification comprises some 9,500 firms; in 1957, they had a net output valued at £414 million. It is composed of some firms making intermediate products, such as wire, nuts and screws, drop forgings, pressings and metal windows, and others manufacturing a great variety of finished products ranging from hand tools, cutlery, metal hollow-ware of all kinds and metal furniture to pins and needles.

Notes on some of these industries are given below.

Cutlery and Flatware

The production of cutlery and flatware is centred in the city of Sheffield. The industry has been built up on the high degree of skill of its craftsmen, but the introduction of modern machinery has largely replaced hand forging, and mass production methods are used today by some firms in producing the cheaper range of products. The highest quality wares, however, are still produced by skilled craftsmen. Although in recent years there has been some increase in the size of the production units, they remain mainly small, and, of some 400 establishments manufacturing cutlery and flatware, over 200 still employ fewer than ten persons.

The annual output of the cutlery and flatware industry is now valued at about £11 million, of which £4 million represents exports, mainly to Australia, the United States and South Africa.

Hollow-ware

This industry is mainly located in the Midlands, Lancashire, Yorkshire, South Wales and London. About 58,000 people were employed at the end of 1958. Hollow-ware production covers a wide range of goods and these are roughly divided into six classes: wrought steel (including galvanised, enamelled and tinned), aluminium, tinplate and terneplate, cast iron, copper, and other metals. There is, however, an increasing development in the production of plastic hollow-ware. There are some 250 establishments, of varying size, which are known to be manufacturing domestic hollow-ware, for example, saucepans and similar kitchen utensils.

The value of annual production approaches £20 million, of which nearly one-fifth represents exports, mainly to Commonwealth countries overseas. Aluminium manufacturers comprise the largest single group, both in the value of total production and in exports.

Hand Tools

The manufacture of hand tools is one of the oldest industries of the United Kingdom. Over 400 different types of hand tools—in many thousands of sizes and patterns—are made in British factories, with Sheffield, Birmingham and other towns in the Midlands as the most important centres. The industry has about 300 establishments employing 10 or more persons, and 450 smaller ones (the majority very small). There are also large manufacturing firms, some of which have more than 1,000 employees, including research and design staffs. The 'do-it-yourself' movement has given rise to a keen demand for tools for use in the home and for woodworking.

In 1958, hand tools to the value of £14½ million were exported, nearly two-fifths of the total output. The four largest markets are India, Australia, South Africa and Canada; the United States is also an important buyer.

CHEMICALS

It is difficult to define the chemical industry since, with the increasing dependence of industry generally on synthetic raw materials, its scope is continually widening. But on the broadest definition the industry includes the manufacture of such products as acids, alkalis, alcohols, industrial gases, explosives, fertilisers, dyestuffs, soaps and detergents, petroleum chemicals, plastics materials, paints and pharmaceuticals. Manufacturing these and other products, the chemical and allied trades (other than mineral oil refining) employ nearly 500,000 people and contribute over 8 per cent of the total net output of all manufacturing industry. Exports of chemicals are also substantial and have increased in value by nearly one-third, and in volume by more than one-third, since 1954, amounting in 1958 to £263 million, or 8 per cent of total United Kingdom exports. Capital investment in the industry (excluding mineral oil refining) totalled nearly £800 million in the ten-year period 1948-57, and is currently running at £120 million to £130 million annually.

The British chemical industry has expanded considerably during the present century. More particularly, recent years have seen a rapid growth which has brought the industry's production up to about three times its pre-war level. The volume of production has nearly doubled since 1948, and the number of employees during that period rose by about one-fifth. This post-war expansion has been most marked in two fields (apart from mineral oil refining)—production of plastics materials generally, and the large-scale manufacture of a wide range of organic chemicals from petroleum.

Heavy Chemicals and Dyestuffs

The heavy chemicals sector covers a wide range of acids, alkalis, alcohols, industrial gases and other basic chemical substances, many of which are fundamental to other branches of the chemical industry as well as to other industries. Output in 1958 of sulphuric acid, one of the most important products, at 2.24 million tons, was more than double the immediate pre-war figure.

Since the war, there has also been a greatly expanded production of raw materials for the manufacture of synthetic detergents, while trichlorethylene has been in big demand in the engineering trades for mechanical degreasing plants. Exports of chemical elements and compounds, which in 1954 were valued at £50.6 million, rose to £60.4 million in 1958; about half were inorganic products. The largest market was Australia, followed by India, Western Germany, the United States, the Netherlands and Canada.

The dyestuffs industry also continues to add to the already comprehensive range of its products, many of them developed from British discoveries in the nineteenth and twentieth centuries. Exports of synthetic organic dyestuffs and pigments in 1958 were valued at £10.2 million.

Petroleum Chemicals

The petroleum chemicals industry in Britain, based on the use of petroleum products and refinery gases, is the largest in Europe. It provides raw materials for the plastics, synthetic detergents, solvents, synthetic rubber and other branches of the chemicals and associated industries. The principal plants are adjacent to the oil refineries at Fawley (on Southampton Water), Stanlow (in Cheshire) and Grangemouth (in Scotland), and at Wilton (in Yorkshire). About £95 million was invested in plant and fixed equipment for the industry in the post-war period to 1958, and it is estimated that over half as much again will be spent in the three years 1959-61 on new plant expected to be in operation by the end of 1961. The oil companies

have a large stake in the industry. Production in 1958 totalled about 320,000 tons (carbon content), nearly double the 1954 quantity. Plants designed to expand substantially supplies of ethylene, styrene monomer, butadiene and other basic materials are being brought into production.

Plastics

The first plastic, celluloid, originally known as 'Parkesine', was produced in Britain in 1865 by Alexander Parkes. Modern plastics originating in Britain include 'Perspex', polyethylene and silicones. (Silicones, which were discovered by Professor Kipping at Nottingham, were developed in the United States and have been made in Britain since 1952.) Since 1939, there has been a very large increase in the overall production of plastics materials. Expansion during the last few years has been concentrated mainly on thermoplastic materials such as polyethylene (used in cable coverings, packaging—notably for foodstuffs—and domestic mouldings), polystyrene (a cheap non-inflammable material used for toys, light mouldings and, more recently, for durable consumer goods), and polyvinyl chloride (known as PVC, and made into industrial conveyor belting as well as a variety of other consumer goods such as raincoats and curtains). Britain was the first country to manufacture plastic-coated steel, in 1957.

In the period 1948–58, net sales of plastics materials have multiplied more than threefold to a total of 416,000 tons in 1958; compared with 1954, net sales have increased by over 50 per cent. Thermoplastic materials, which in 1958 accounted for 245,000 tons, have increased by nearly 90 per cent since 1954. Exports have also grown rapidly, and (including waste and scrap) 123,000 tons, valued at more than £32 million, were exported in 1958; 40 per cent of exports go to European countries. The industry is undertaking large extensions to its productive capacity and is also spending considerable sums on development of improved materials. Plants for commercial production of polypropylene were built in Britain in 1959.

Fertilisers

The production of fertilisers owes much to the pioneer work of the British scientists, Sir John Lawes and Sir Joseph Gilbert, and the research now carried on at Rothamsted, Hertfordshire, and at the Macaulay Institute, Aberdeen, is of world-wide importance. Output of nitrogenous fertilisers (in terms of nitrogen content) in 1958 totalled 342,000 tons, nearly three times the pre-war volume, and 330,000 tons of phosphatic fertilisers were produced (in terms of phosphate content), more than twice the pre-war figure. Sales in the form of compound fertilisers in granulated form are increasing; production of these was 2.2 million tons (gross weight) in 1958.

The value of exports of manufactured fertilisers, almost all in the form of ammonium sulphate, totalled £5.4 million in 1958, the principal markets being Ceylon and other Commonwealth countries overseas.

Pesticides

Important British discoveries in recent years have led to major developments in the production of selective weed-killers such as methyl chloro phenoxy acetic acid (MCPA), and of insecticides based on benzenhexachloride (BHC). Overseas markets take the major proportion of United Kingdom production of these and other well-known pesticides, such as systemic insecticides, and exports reached a value of some £3.9 million in 1958. New products for plant protection, notably new forms of synthetic hormones, are being developed.

Pharmaceuticals and Toilet Preparations

Many of the pharmaceutical products sold today have been introduced in the past twenty years. These products include sulphonamides, antibiotics (e.g., penicillin, whose properties were first discovered by Sir Alexander Fleming in 1928), hormones, anti-malarial drugs (e.g., 'Paludrine'), liver extracts, anti-histamines and anti-tubercular drugs.

Recent British discoveries include the isolation of the basic molecule of penicillin, and a new drug for the treatment of leprosy. Some £4 million a year is spent on research. About half of the larger drug manufacturing firms in Britain are subsidiaries of overseas concerns. Total exports of medicinal and pharmaceutical preparations and druggists' wares in 1958 amounted to a value of £40.5 million, of which £8.2 million worth consisted of antibiotics.

The toilet preparations and soap industry has shown a steady expansion since the war, and the value of exports was £26.2 million in 1958, about one-quarter being detergents. Although many firms are subsidiaries of American and French companies, there are several wholly British firms whose products have world-wide sales.

Paints

About 40,000 people are employed in the paint industry, which comprises some 600 establishments; about half the total production is accounted for by fewer than 40 establishments, each employing more than 200 persons.

In recent years, the application of improved techniques has resulted in rapid development, in particular the use of important new ranges of synthetic resins and various types of titanium dioxide pigment. The value of direct exports of pigments and paints rose by one-third between 1954 and 1958 to a total of £23.8 million, of which 9 per cent represented shipments to Canada, the largest single market. One-third of the exports are in the form of ready-mixed paints, which command a growing market overseas. The industry's indirect contribution to exports in the form of surface coatings for finished goods is also very considerable.

Isotopes and Radioactive Materials

Isotopes and radioactive materials, used in medicine, agriculture and industry, are produced in the United Kingdom at the Atomic Energy Research Establishment at Harwell and dispatched from there and from the Radiochemical Centre at Amersham. Britain is the world's largest exporter of these substances. In the year ended 31st March, 1959, sales of isotopes and related products were valued at about £800,000, some 60 per cent representing sales to overseas countries.

TEXTILES AND CLOTHING

The value of exports in the textiles and clothing group as a whole, including manufactures of wool, cotton, linen, jute, silk, rayon and other man-made fibres, lace, hosiery, woven apparel and carpets, amounted in 1958 to about £340 million or slightly over 10.5 per cent of total United Kingdom exports. Nearly 1.5 million people were employed in these industries at the end of 1958, including about 216,000 in the cotton textile industry, 196,000 in the wool textile industry, 83,000 in rayon and other man-made fibre production and weaving and in silk, 89,000 in textile finishing and associated processes, 120,000 in hosiery and knitted goods, and about half a million in clothing (excluding footwear).

Cotton

The invention of mechanical spinning and weaving in the second half of the

eighteenth century led to cotton becoming Britain's chief consumer goods industry and cotton piece-goods its largest export during the nineteenth century.

In the twentieth century, increasing foreign competition and the tendency of many countries, notably India, to set up their own textile industry cut progressively into British markets. During the second world war, numbers of mills were closed and, while many were brought back into production in the early post-war years, the industry has recently again been declining in size, although it remains one of the largest consumer goods-industries. The labour force has dropped to about 50 per cent of the 1937 level, and at the end of 1958, there were about 125,000 persons employed in the spinning and doubling section of the industry, and 91,000 in weaving. Two-thirds of the workers in the industry are women.

Most of the industry is located in Lancashire, the north-east of the county being mainly concerned with weaving and the south-east with spinning. Manchester is the commercial centre. The Cotton Exchange, which deals in raw cotton, is situated in Liverpool.

In April 1959, the Government announced a plan to reduce surplus capacity in the industry. Exchequer funds will pay for two-thirds of the cost of removing surplus capacity, and will provide a grant of about one-quarter towards costs of modernisation and re-equipment. The scheme is estimated to cost about £30 million spread over five years, and will be administered by a special agency under the Cotton Board, a statutory body with the constitution and powers of a Development Council.

Production rose steadily from 1945 until the end of 1951, since when the level of activity has been subject to marked fluctuations. Technical advances, notably the introduction of new finishes for cotton goods with drip-dry, crease-resisting and other properties, have helped to widen the industry's markets, but the rising scale of duty-free imports of grey cloth (240 million square yards in 1958) has caused concern. Agreements have been, or are being, negotiated with Commonwealth countries to fix ceilings for such imports. Production of cotton, man-made fibres and mixture cloth in the industry in 1958 was about 50 per cent of the 1937 level, and consumption of raw cotton totalled some 287,000 tons as against about 639,000 tons in 1937. The United States in 1958 supplied nearly half Britain's imports of raw cotton, and the second largest supplier was the Sudan, which provides the bulk of the long-staple varieties.

Exports have suffered as a result of widespread import restrictions and the tendency for industries, protected by quotas, to be established in former markets. In 1958, the value of exports of yarn, thread and woven fabrics amounted to £71 million. About 384 million square yards of cotton fabrics valued at £51 million were sent overseas, two-thirds to Commonwealth countries, the largest markets being Australia, South Africa and New Zealand.

The British Cotton Industry Research Association (Shirley Institute), founded in 1919, undertakes scientific and technical research in connection with cotton and its utilisation.

Wool

The United Kingdom wool textile industry, the largest in the world, is the most ancient of Britain's staple industries and has been an important source of wealth since medieval times. There are two main branches—woollen and worsted. While about 85 per cent of woollens and 95 per cent of worsteds are made in the West Riding of Yorkshire, Scotland and the West of England have retained their importance as specialised producers of high quality woollen cloth. The woollen side of the industry is normally organised on a vertical basis, with each firm undertaking

the full process of manufacture from raw material to finished product, but for a variety of reasons the worsted industry is organised horizontally—combing, spinning and weaving being done by separate firms. In recent years, however, there has been a tendency in the worsted industry towards the formation of holding companies controlling a number of subsidiary combing, spinning and weaving firms, all the worsted processes being carried out within the one organisation. Small firms, employing fewer than 300 workers, predominate in the industry. Output reached a post-war peak at the end of 1950, but this was followed by the recession of 1951-52, which reached the lowest point in the middle of 1952. Production subsequently recovered and output in some sections in 1957 exceeded the level of 1950. A world-wide decline in the wool textile industry gave rise to a marked drop in output in 1958; a recovery was in evidence by the end of that year.

Persons employed in the industry in December 1958 numbered 196,000.

The United Kingdom's annual consumption of virgin wool is about 480 million lb. (clean weight), equivalent to about 20 per cent of total world consumption (excluding Eastern Europe and China), and about 600 million lb. if re-used and re-processed wools are included. Blending of wool with man-made fibres has grown rapidly and accounted for some 10 per cent of total consumption of all fibres used in the industry in 1957; in 1958, however, the price of wool having dropped sharply, the proportion tended to fall.

The wool industry remains one of Britain's leading export industries, with about one-quarter of its total output shipped abroad, despite the obstacles in the form of widespread import restrictions which it has to face; the total value of exports of wool tops, woollen and worsted yarns and woven fabrics in 1958 was about £119 million, of which £25 million represented exports to the United States and Canada. In addition, there were considerable exports of wool in other forms, including carpets and clothing.

Research is carried on mainly by the Wool Industries Research Association, which is financed partly by a statutory levy on the industry and partly by a grant from the Department of Scientific and Industrial Research.

The National Wool Textile Export Corporation, which is financed by a statutory levy on the industry, is responsible for assistance to exporters and for developing overseas markets.

Man-made Fibres

Rayon is produced from cellulose, either in the form of woodpulp or cotton linters. Its early development took place to a large extent in Britain. Production is spread throughout the Midlands and Lancashire, with outposts in other areas. There are seven companies engaged in the production of rayon, four producing only viscose, two producing only acetate, and one both viscose and acetate. One company accounts for over four-fifths of total output. Annual average production has in recent years been of the order of 420 million lb., of which about 240 million lb. was in the form of staple fibre—about ten times the pre-war average. Exports in 1958 were lower than for some years and fell to £2.8 million in value. Technical problems are studied at the research station of the British Rayon Research Association at Wythenshawe, Manchester.

Nylon is produced from a combination of chemical substances, most of which are obtained from indigenous raw materials. Production of nylon yarn started in Britain in 1941 for military uses, such as parachutes. Large-scale production began at Pontypool, in South Wales, in 1948. Capacity at this plant has been greatly increased, and a second factory came into operation at Doncaster, in Yorkshire,

in 1955. A third plant is to be opened near Gloucester in 1960. Nylon is used extensively for clothing fabrics and stockings and has wide industrial uses, including the manufacture of tyre cords, fishing nets, fire hose, ropes and conveyor belts. Annual productive capacity is expected to amount to 70 million lb. by 1960.

'Terylene' polyester fibre, a product of research in the laboratories of the Calico Printers' Association, Manchester, is made on a large scale at Wilton, Yorkshire, by Imperial Chemical Industries Ltd. Annual productive capacity was increased to 30 million pounds weight in 1959, and it is planned to construct a new plant, also at Wilton, which will enable annual production to reach 50 million pounds. A plant for the manufacture of 'Terylene' has been set up in Canada, and the British patent holders have licensed its manufacture in other countries, including France, the German Federal Republic, Italy, the Netherlands, and Japan.

'Fibrolane' is a British-made protein fibre, with wool-like properties, derived from casein. Other man-made fibres at present produced in Britain include 'Courlene' (a polythene fibre), and 'Alginate' (derived from seaweed).

'Courtelle', an acrylic fibre, has been manufactured on a commercial scale at Grimsby, in Lincolnshire, since early in 1959. A plant to manufacture another acrylic fibre, 'Acrilan', started operating at Coleraine, in Northern Ireland, early in 1959 and is expected to reach full production of 11 million lb. a year in 1960.

Since the advent of rayon in its various forms and, more recently, of the new man-made fibres, British textile manufacturers have been developing a number of ways of blending these with natural fibres and with each other. By this means they can produce economically fabrics and garments with attractive and useful new combinations of texture, colour, and finish, and with moisture-absorbent, hard-wearing, drip-dry and crease-resisting properties.

Hosiery and Knitwear

The hosiery and knitwear industry employs about 120,000 workers, of whom two-thirds are women. About 80 per cent of the 1,100 firms in the industry employ fewer than 50, and only three manufacturers have more than 4,000 employees. The industry is widely distributed throughout Great Britain, with Scotland and the east Midlands as the two most important centres. Annual consumption of yarns totals about 80,000 tons, nearly half of which are woollen yarns, and a growing proportion are of fully synthetic fibres. Exports of stockings and socks in 1958 were worth £3.5 million, Canada being the largest market, while those of knitted goods totalled £7.9 million; sales to the largest buyer, the United States, have dropped appreciably since 1956.

The Hosiery and Allied Trades Research Association, with laboratories at Nottingham, undertakes collective research, and is particularly concerned with the improvement of quality.

Other Textiles

Linen has been made in Britain for more than a thousand years and it is believed that the art of linen weaving was already being practised during the seventh century. Today it is an industry mainly of small firms, chiefly in Northern Ireland (the greatest linen manufacturing region in the world), with most of the remainder in Scotland. The principal raw material of the industry is flax, which is mainly imported (the chief supplier is Belgium), but considerable quantities of man-made fibres and cotton are also used, and a certain amount of soft hemp and jute, particularly in Scotland. Broadly speaking, the Northern Ireland industry concentrates on

the lighter types of fabrics, while in Scotland production is largely, but not exclusively, of coarse linens and canvas. Exports were valued at £14 million in 1958, including £8.4 million worth of linen fabrics, £2.1 million of flax linen yarns and £1 million of damask table linen. Technical problems are investigated by the Research Institute of the Linen Industry Research Association, formed in 1919.

Jute is manufactured on a large scale in Dundee—the centre of the world's oldest jute industry. About 40 per cent of jute yarn production is utilised in the manufacture of carpets, cordage, ropes and other products. The balance is woven into fabrics for a wide range of uses, but principally for packaging material. Annual production of jute tissues averages about 80,000 tons. Some 17,600 workers are employed. The value of exports in 1958 totalled about £4 million (including second-hand bags).

Research facilities are concentrated at the laboratories of the British Jute Trade Research Association. About £11 million has been spent on a post-war re-equipment programme.

Silk exports were valued at about £0.5 million in 1958. Raw silk is supplied mainly from Japan, China and Italy.

Clothing

The clothing industry in Britain, the largest in Europe, is one of the most important employers of labour with about 500,000 workers, three-quarters of whom are women and girls. It had a gross annual output valued at about £540 million (including hats and other millinery) in 1957. Although the industry is highly mechanised—only in the women's outerwear section and in the quality fashion trade do tailors and dressmakers predominate—the typical firm is small. Unofficial estimates suggest that five-sixths of the concerns in the industry employ fewer than 100 workers. The principal manufacturing centres are London, Leeds and Manchester. Many of the newest factories are located in the Development Areas.

Both the textile trades and the ready-to-wear clothes industries are engaged in promoting British fashions. The fashion industry, principally through the Apparel and Fashion Industry's Association, and the textile trades, through the Textile and London Fashion Organisation, arrange fashion shows. In the *haute couture* branch of the trade, models are shown by the Incorporated Society of London Fashion Designers.

Carpets

There are some 70 manufacturers in the United Kingdom of the traditional Axminster and Wilton carpets, ranging in size from enterprises with several thousand employees to very small firms with only a few workers. In addition, there is also an expanding branch of the industry engaged in making tufted carpets, a form of carpeting in which the pile is inserted into a pre-woven backing. Over 30,000 workers are employed, and the principal manufacturing centres include Kidderminster (in Worcestershire), Halifax and Dewsbury (in the West Riding of Yorkshire), Durham, Glasgow and Kilmarnock (in Scotland). Wool accounts for about 90 per cent of the raw materials used in the surface yarns in carpet manufacture, and, in fact, more than two-thirds of the traditional carpets produced are of a pure woollen or worsted pile.

According to the Federation of British Carpet Manufacturers, 1958 was the most successful year in the history of the industry. Sales (at ex-factory values) totalled 48.7 million square yards, valued at £71.1 million, compared with £66.8

million in 1957. Exports, however, have been faced with growing import restrictions in overseas markets, and the 1958 total at a value of £9.2 million was the lowest for several years.

FOOD, DRINK AND TOBACCO

The industries coming within the food, drink and tobacco group employ more than 900,000 people, and the annual value of exports averages about £200 million.

Notes on some of these industries are given below.

Bread and Flour Confectionery and Biscuits

The average weekly household consumption of bread per head of population in Great Britain in 1958 was about 3 pounds. In England and Wales particularly, the small 'family' type of baker, producing bread by hand or by semi-mechanical methods, is still numerous, but there is an increasing trend towards concentrating production in large mechanical bakeries; about 60 per cent of bread is made in these bakeries, which specialise in sliced and wrapped loaves. In the smaller bakeries, numbering about 12,000, production of cake and other flour confectionery is usually allied to bread production. Some 190,000 people are employed in the bread and flour confectionery industry.

Production of biscuits, of which there are about 250 manufacturers with some 56,000 employees, is estimated to be about 75 per cent higher than in the immediate pre-war period. Weekly consumption of biscuits per head in Britain was about 5½ oz. in 1958. British biscuits have gained a world-wide reputation, and despite the problem of import restrictions in several overseas markets, exports in 1958 were valued at £5.6 million.

Cocoa, Chocolate and Sugar Confectionery

The chocolate and sugar confectionery industry, which employs some 110,000 persons, is composed of a small number of very large manufacturers and many hundreds of medium-sized and smaller manufacturers. The industry's products are highly competitive and highly advertised. Over 90 per cent of the production of chocolate and sugar confectionery is in the hands of about 100 firms, while the more specialised products—cocoa powder, cocoa butter and chocolate covering—are manufactured by about 50 firms.

The main ingredients used by the industry are sugar, cocoa beans, glucose, milk, nuts and fats. Production of chocolate and sugar confectionery for home and export sale totalled about 660,000 tons in 1958. There are virtually no restrictions on imports of chocolate and confectionery, but these totalled less than 9,000 tons in 1958. Consumption of chocolate and confectionery in the United Kingdom is far higher than in any other country, being equivalent to about 8¼ oz. per head per week in 1958, compared with 7 oz. per head before the war. In 1958, the value of exports of chocolate, sugar confectionery and cocoa products totalled £18.7 million, compared with a record level of over £19 million in 1955. About two-thirds of exports consist of cocoa products and chocolate, and about one-third goes to dollar markets. Manufacturers' total annual turnover is well over £200 million, and retail expenditure on chocolate and sugar confectionery is estimated in 1958 to have been at the record level of £259 million.

Jams and Marmalades

The jams and marmalades industry in the United Kingdom is highly competitive, with the three largest manufacturers accounting for over half the total output. Changes in the pattern of consumer expenditure on food in the past ten years have

led to a gradual fall in production—from 329,000 tons in 1949 to 214,000 tons in 1957, recovering to 223,000 tons in 1958. Strawberry, raspberry and blackcurrant jams have the largest sales. There is a sizable export trade in high-quality products, especially marmalade, and £1.6 million worth was exported in 1958.

Canned Foods and Quick-Frozen Foods

The British Navy was using canned foods as long ago as 1813, but it was not until the present century that a considerable industry developed. Rapid expansion has taken place since 1935, and the annual sales of the industry are now believed to be worth some £200 million.

By far the largest product of the canning industry is vegetables, of which 509,000 tons were produced in 1958; over one-third is processed peas, while output of beans in tomato sauce is almost as large. About 90,000 tons of fruit (in particular, plums) are canned annually. Canned soup production has increased by over two-thirds since 1953, totalling 155,000 tons in 1958; the largest firm probably accounts for half the total market. Canned meat production has also risen sharply, the 1958 total of 46,000 tons being 50 per cent higher than in 1953. About 75,000 workers are employed in preserving fruit and vegetables. Exports of canned fruit in 1958 reached a value of £4 million. Basic research is undertaken by the British Food Manufacturing Industries Research Association.

The quick freezing of foods has been expanding rapidly in Britain, particularly since 1954. The most important products are white fish—some 43,000 tons were quick-frozen in 1958—and vegetables, about two-thirds being peas. Other products include fruit, poultry, meat and ready-prepared foods.

Whisky

Scotch whisky, which was first distilled at least as long ago as the fifteenth century, enjoys world-wide popularity. Whiskies are blends of twenty or more different kinds, some made from malted barley, some from other grains. Whisky requires several years to mature, and the 52 million proof gallons (a record) produced in 1958 will not be on sale for some years. Stocks of whisky amount to about 240 million proof gallons. Whisky is one of the United Kingdom's largest dollar earners; more than half the annual exports, which in 1958 attained the highest level so far recorded of £56 million, are shipped to the United States. Other valuable markets are Canada and other Commonwealth countries, and Venezuela.

Gin

Production of gin in the United Kingdom has risen steadily since 1952, and in 1958 amounted to over 7 million proof gallons (an increase of nearly half since 1952), over one-third of which was exported. The main distilleries are situated in London, and one group of companies accounts for about half the total output. Although most of the larger manufacturers also have distilleries overseas, exports have expanded, and in 1958 were worth £3.8 million, the United States being much the largest market.

Brewing and Malting

Brewing. There are some 400 separate breweries located throughout the United Kingdom, of which the main centres are London, south Lancashire, Burton-on-Trent (Staffordshire), Birmingham, and Edinburgh. In the main, brewers distribute their beer for consumption within 30 miles of the brewery, but some of the largest firms send their beer all over the country. Much of the beer is consumed in draught, but in recent years the demand for bottled beer has increased and is now

probably as much as two-fifths of total consumption. Bottling is carried out by both brewers and independent bottling establishments. The industry's raw materials are malt (chiefly made from home-grown barley), sugar and hops. Consumption of beer has declined appreciably from the exceptional levels of the immediate post-war years; the drop has, however, largely been halted since 1951. Canned beer is becoming increasingly popular; output in 1958 was estimated at about 100 million cans. Substantial capital investment, estimated at about £8 million a year, is being undertaken, together with a similar sum for the installation of bottling equipment. The excise duty on beer accounts for about two-fifths of the retail price. In the year ended 31st March, 1959, duty of £253 million was paid on nearly 25 million bulk barrels. Since the war the industry has maintained a sizable export trade, which in 1958 was valued at £2·8 million.

Malting. There are several hundred malting units in the United Kingdom. Some of these are operated by brewers who make all or part of their own malt. The remainder are operated by maltsters whose product is sold principally to brewers at home and abroad, but some malt is supplied to distillers and vinegar brewers, and also to the manufacturers of malt extract for use in the baking, confectionery and textile industries. The popularity of British malt has been established with brewers throughout the world, and in 1958 malt exports were valued at £1·7 million. These malting units are mainly situated in the barley-growing areas which lie east of a line drawn from Edinburgh, through Burton-on-Trent (Staffordshire), to Lyme Regis (Dorset).

Malting usually takes place in the cooler months following the harvest, but with the aid of air-conditioning plant and other modern developments some units can operate throughout the year. Grain is the only raw material used by the industry—chiefly home-grown barley especially grown for the purpose.

Soft Drinks

The rapid expansion of the soft drinks industry in the years since the second world war, and especially since 1954, reflects both changes in public taste and rising standards of living. The industry's output in 1958 was estimated at 332 million gallons in terms of ready-to-drink liquid, a slight fall, compared with 1957, due to the wet summer of 1958, but some 200 million gallons more than the 1938 total.

The industry may be divided into three broad groups: several hundred small manufacturers; about 150 larger firms supplying a regional market only; and some 20 firms producing widely advertised brands which are marketed on a national scale. There is also some degree of specialisation by firms in the production of the various types—e.g., carbonated drinks, cola-based drinks, squashes and cordials, tonic waters and 'mixers', and concentrated drinks (in which the whole fruit is used).

Tobacco

The United Kingdom tobacco industry, which employs some 48,000 people, manufactures almost all the cigarettes and other tobacco goods sold in the country. In 1958, personal expenditure on these goods amounted to £1,030 million (of which over two-thirds was tax revenue) and, in addition, exports worth £22 million (some 90 per cent of which were cigarettes) were shipped to a large number of overseas markets. The main centres of production are in and around Bristol, Liverpool, London, Manchester, Newcastle, Nottingham, Glasgow and Belfast. The two largest manufacturing groups now account for about 90 per cent of output, compared with 80 per cent some six years ago.

The tobacco industry uses over 300 million lb. annually of raw tobacco of all types, all of which is imported. The main sources are the United States, Rhodesia, India and Canada, in that order. Most of this tobacco goes to make cigarettes (nearly seven-eighths) and pipe and cigarette tobaccos; about 12 per cent of cigarette sales are in the form of filter-tipped brands, with the demand for 'king-size' (i.e. larger) types rising markedly. There is also some production of cigars and snuff; cigars, chiefly Cuban, Jamaican and Dutch, are also imported.

MISCELLANEOUS INDUSTRIES

This broad heading covers a very wide variety of industries and groups of industries, from building materials to toys, employing over 1.7 million people at the end of 1958.

Notes on some of these industries are given below.

Brickmaking

Introduced by the Romans, brickmaking is one of Britain's oldest industries, and something like 2,000 different varieties of building bricks are produced in the United Kingdom today. These are made in some 800 works which range from small seasonal yards using traditional hand methods to highly mechanised plants. More than two-fifths of production consists of the Fletton type of brick, demand for which is steadily increasing and which is made mainly in the Peterborough and Bedfordshire areas. The chief producer is the largest brick manufacturing company in the world. As a result of changes in building methods, total output of bricks (6,500 million a year) has fallen to about 15 per cent below the 1938 quantity.

Refractories

Refractories are essential in the operation of blast furnaces, steel furnaces and other metallic furnaces and are used extensively in many other industries, including non-ferrous metals, ceramics, glassware and chemicals, in nuclear energy and jet propulsion. The chief raw materials required for their manufacture are indigenous except for magnesite (which is obtained partly from overseas and partly from production of sea-water magnesite) and chrome ore.

The chief centres of the industry are in the Midlands, west Yorkshire, north-east England, Scotland, and Wales. Production has averaged about 2 million tons a year since 1948, mainly for home use. Exports of refractory construction materials in 1958 were valued at about £4.2 million, as compared with £2.8 million in 1955.

Domestic Pottery

The domestic pottery industry is one of the oldest craft industries in Britain; the making of domestic pottery dates back to before the Roman occupation. The chief raw materials, china clay, ball clay and china stone, come from Devon, Cornwall and Dorset, where known deposits of high quality are expected to last for at least 100 years.

The Stoke-on-Trent area in Staffordshire, comprising the six towns of Stoke, Burslem, Tunstall, Hanley, Fenton and Longton, is the centre of the industry and 95 per cent of production capacity is concentrated in that area. Other important factories are at Worcester, Derby, Bristol and Poole. The industry employs about 35,000 workers, of whom more than half are engaged in the production of table and ornamental ware.

Of the £32 million worth of pottery produced in 1958, over £14 million worth was for export. About three-quarters of bone china exports go to Canada and the

United States, and the largest markets for decorated earthenware are Canada, Australia and the United States.

The modern industry benefits from a tradition of good design and craftsmanship (made world-famous by a long line of great British potters) which, with the excellent technical qualities of its products, is the basis of the large overseas and domestic demand for its products. Among the famous makes of British pottery are: Wedgwood, Spode, Royal Worcester, Royal Doulton and Royal Crown Derby.

Glass

Britain has a large and efficient glass industry, the third largest in the world, with a wide diversity of products, employing some 75,000 workers. The section of the industry devoted to the manufacture of plate and sheet glass in their various forms is organised for quantity production, and the development of modern methods has enabled the industry to cater for an increasing range of requirements. Glass can now be supplied in sheets of great size and can be made almost unbreakable. Its use for internal decoration and as a finish for internal and external walls has greatly increased in recent years. Large quantities of safety glass are produced for the motor industry. A British firm has developed, at a cost of £4 million, a revolutionary glass-making process for producing 'float glass'.

Rapid technical progress has led to the large-scale production of tubular glass, optical glass and also glass insulators for use in electricity transmission. Glass fibres, used for insulating purposes and as reinforcement for plastics, are thought to offer great scope for further development. They are already being used in the manufacture of travel goods, boats and perambulators. Bottles and jars, table ware and lamp bulbs are now made by completely automatic machinery and the advance of the industry is shown by the increase in exports of all glassware (including plate and sheet glass) from a negligible level in 1938 to a value of £16.8 million in 1958; this total included £9.7 million worth of plate and sheet glass, of which more than one-third was exported to North America.

A traditional product is hand-made lead-crystal glassware of very high quality; a high proportion of output is exported, mostly to Australia, South Africa, New Zealand, Canada, and the United States.

Collective research is undertaken by the British Glass Industry Research Association, and much research work is also carried on by the Department of Glass Technology at Sheffield University, the first of its kind in the world.

Cement

The cement industry of the United Kingdom is chiefly concerned with the manufacture of Portland cement. Invented by Joseph Aspdin and patented in 1824, this material and the methods of its production have been the subject of continuous technical improvement and intensive research. The capacity of the industry, which employs about 16,000 people, has increased substantially since the war to meet the growing demands of the building industry. Annual output, which reached 7.7 million tons in 1938, had risen to 12.8 million tons by 1956, falling back to 11.6 million tons in 1958, valued at more than £70 million. One group of companies is responsible for about two-thirds of total output. In 1958, 1.18 million tons (valued at £6.5 million) were exported, nearly half to West Africa, compared with a peak total of 2.06 million tons in 1952; the fall reflects the expansion of production capacity in overseas countries.

Jewellery, Gold and Silver Ware

The making of jewellery, gold and silver ware is an industry in which British

craftsmen are heirs to a great tradition. The quality of the metal in gold and silver wares made or sold in the United Kingdom is guaranteed by a 'hall-mark'. The law requires that gold and silver plate shall not be sold until it has been hall-marked at one of the six Assay Offices situated at London, Birmingham, Chester, Sheffield, Edinburgh, and Glasgow. A departmental committee has recommended, in a report published in March 1959, that the number of assay offices should be reduced to four, that hall-marks should also be applied to platinum, and that statutory regulations should be strengthened.

The importance of maintaining definite standards of fineness for wares of gold and silver has always been recognised, and the Goldsmiths' Company in London has carried out the assay and hall-marking of such wares since 1327 when Edward III gave the company its first charter.

Toys

The toy industry in Britain, the largest in Europe, has expanded greatly in the last ten years, and at the end of 1958 it employed about 30,000 persons. There are over 300 manufacturers, mostly small in size; the dozen largest manufacturers are responsible for half the output which, in 1958, amounted in value to nearly £36 million. Exports in that year were valued at over £7 million, compared with £0.5 million in 1938; Canada, Australia and the United States are the leading markets. The industry estimates that annual expenditure in the United Kingdom on toys averages £5 per child. Current trends are towards increased production of small-scale precision models of equipment and vehicles and a greater use of plastic materials, but demand for traditional lines, such as toy soldiers, train sets and dolls, remains unaffected.

Leather

Leather tanning is one of Britain's oldest industries. Tanneries are situated in most parts of Britain, but there are important concentrations in Lancashire, Yorkshire, the north Midlands and the London area. Many different types of leather are produced, ranging from the heavy types produced for industrial uses, such as machinery belting, to all types of high quality leather for footwear and for leather goods.

At the end of 1958, about 31,000 persons were employed in the leather tanning and dressing and associated industries, and 23,000 in the leather goods industries. The United Kingdom is the world's leading leather exporter, with exports valued in 1958 at £14.7 million, of which £4.4 million worth went to North America and £2.1 million worth to Western Germany. Research into tanning processes and the improvement of the quality of finished leather is undertaken by the British Leather Manufacturers' Research Association.

Leather Footwear

The British footwear industry is among the most important in the world, and factories are located throughout the United Kingdom. Some areas concentrate on production of particular types, e.g., the Rossendale Valley region of Lancashire for slippers, Bristol for heavy industrial footwear for miners and agricultural workers, Northampton for men's and youths' footwear, and Leicester for women's and girls' shoes. There are about 600 firms in the industry, producing footwear of all types. The British Boot, Shoe and Allied Trades Research Association enjoys a world-wide reputation in all matters connected with shoemaking.

At the end of 1958, some 112,000 persons were employed in the manufacture of footwear (excluding rubber footwear); in that year, output totalled 138 million

pairs, of which 103 million pairs represented boots and shoes made mainly of leather. The United Kingdom is the world's second largest exporter of footwear, and in 1958, 7 million pairs, valued at about £10 million, were exported. The United States took about one-fifth of these exports and Canada about one-tenth.

Paper and Board

The manufacture of paper in Great Britain was not firmly established until 1678, but records show that some paper was produced as far back as the year 1492.

About two-thirds of the many different materials, totalling some 3·8 million tons a year, used by the industry come from abroad. The balance consists mainly of waste paper recovered from domestic sources.

Total production in 1958 of all types of paper and board (including newsprint) amounted to 3·5 million tons—the highest ever reached—compared with a pre-war figure of 2·6 million tons. Of this, newsprint accounted for 626,000 tons as against 800,000 tons pre-war, and board for 1·06 million tons; since 1953, output of board has risen by one-third, mainly as a result of its growing use as packaging material. Exports for the same period amounted to 217,000 tons, valued at £26·4 million, including 105,000 tons of newsprint, valued at £6·4 million. The bulk of the export trade is to sterling area countries, mainly Australia, South Africa, New Zealand, the Irish Republic, and India.

The industry comprises some 200 mills producing almost every type of paper and board. There are also many firms engaged in the conversion of paper and board for various purposes. Considerable interests are held abroad; there are pulp and paper producing mills in the United States, Canada and other parts of the Commonwealth, and in the Scandinavian countries.

Domestic Furniture

The domestic furniture industry in Britain consists chiefly of small firms; in the ten years to 1959, the total number of firms has dropped by about one-third to under 2,000. London is the largest centre for furniture manufacturing, but nearly one-tenth of the total output comes from High Wycombe, in Buckinghamshire. Some 80,000 workers are employed. The value of output of firms with over 10 operatives totalled nearly £116 million in 1958. A Furniture Development Council was established in 1949, under the Development Councils Act of 1947, to improve the efficiency of the industry. It undertakes research, training and education, provides a technical information service and publishes statistics.

Printing and Publishing

Printing is essentially an industry of small enterprises. At least two-thirds of the firms have fewer than 25 employees. The main sections of the industry are concentrated in the larger towns, notably London, although firms engaged in more general printing are also located in smaller centres. The shortage of skilled workers has led firms to introduce the latest developments in high-speed printing equipment, including electronic engraving machines and advanced processes of photographic reproduction. The annual turnover of the printing, bookbinding and publishing industries, in which about 245,000 people were employed in 1958, exceeds £300 million. In addition, about 125,000 were engaged in the printing and publishing of newspapers and periodicals, with an annual turnover of about £280 million.

Book publishing¹ is predominantly an industry of small firms, mostly concentrated in London. Excluding H.M. Stationery Office, only 10 of the several hundred

¹ For further information on publishing see p. 229.

publishing firms bring out more than 200 new titles each year, and a further 13 between 100 and 200. Amalgamations have led to the establishment of larger units in recent years. Popularity of paper-backed books has increased rapidly, and sales, some 60 million copies in 1958, have trebled since 1953.

In 1958, total sales of books amounted to about £63.6 million, and the value of exports reached the record level of £23.8 million. Australia, the United States, and South Africa are the most important overseas markets.

Rubber

The United Kingdom rubber manufacturing industry is the oldest in the world, dating from 1819 when Hancock, the inventor of the first method of processing raw rubber on a commercial scale, set up a factory in London. He afterwards collaborated with Macintosh, the inventor of waterproof garments, and it was another Scotsman, Dunlop, who in 1888 devised the pneumatic tyre. At the present day, tyres and tubes represent more than half the total output of the industry. More recently, British firms have pioneered cellular rubber and latex foam products, and they also make a great variety of other rubber manufactures, the most important being rubber footwear, conveyor belting, cables, hose and thread.

The industry is second in size only to that of the United States. There are some 600 firms located throughout the country, employing about 113,000 people and, in 1958, their consumption of rubber totalled 281,000 tons, including 33,500 tons of reclaimed rubber. Exports of manufactured goods in the same year were valued at £37 million, two-thirds in the form of tyres and tubes. This figure does not take into account the large indirect exports on motor vehicles.

A synthetic rubber plant at Hythe, near Southampton, using raw materials from the nearby oil refinery at Fawley, started operating in 1958. It has an annual capacity of about 70,000 tons of styrene-butadiene rubber, about 15,000 tons more than present United Kingdom consumption, which hitherto has been met from dollar sources. There are also several smaller plants supplying special-purpose synthetic rubber.

Although the industry is highly mechanised there is still room for craftsmanship, as in the building of a tyre, where perfect quality depends on the skill of the individual. The large manufacturers undertake research on a considerable scale into new methods and materials and, in addition, advanced research work is carried out at the Shrewsbury Laboratories of the Research Association of British Rubber Manufacturers.

X. TRANSPORT AND COMMUNICATIONS

SHIPPING

About 17·2 per cent of the world's shipping tonnage of 100 gross tons and over is registered in the United Kingdom, which has the largest merchant marine in active employment. If the tonnage in the United States reserve fleet and the tonnage employed on the Great Lakes is excluded, the United Kingdom's proportion of world shipping tonnage is 20·2 per cent. United Kingdom ships are estimated to carry nearly one-fifth of the world's international sea-borne passenger and goods traffic, and ply regularly on the routes linking the countries of the Commonwealth and also to most of the main ports throughout the world. The amount of the United Kingdom's own sea-borne trade carried in British ships is not known exactly, but it has been estimated that about 60 per cent of its imports and 75 per cent of its exports, by value, are carried in British registered ships. The United Kingdom balance of payments figures show that shipping provides one of the biggest net contributions to the balance of payments; in 1958, it amounted to £167 million. This figure does not, however, represent the total net overseas earnings of United Kingdom shipping since it excludes tanker earnings and includes some of the disbursements of foreign ships in United Kingdom ports and the payments for the use of foreign ships. The last survey, made in 1952, of the total net overseas earnings by all types of United Kingdom shipping gave a figure of £221 million.

THE MERCHANT FLEET

At 30th June, 1958, a total of 20·3 million gross tons of merchant shipping (steam and motor vessels of 100 gross tons and over) was registered in the United Kingdom—a tonnage equal to the peak year of 1930.

Recent trends in the composition of the merchant fleet have been the reduction of tramp tonnage, the growth of tanker tonnage, the increasing size of tankers, and the commissioning of vessels specially built to carry ore, sugar and other commodities in bulk. Including Admiralty and other tankers, the United Kingdom accounts for over 5·9 million gross tons or nearly 18 per cent of the world's total tanker tonnage.

Propulsion

The amount of coal-fired tonnage continues to fall and now stands at about three-quarters of a million gross tons. Oil has taken the place of coal in steamships, while steam has continued to give place to the diesel engine, more than 45 per cent of all tonnage being diesel-driven in 1958. In recent years, experiments have been made in the use of gas turbines in ships. In March 1952, the first crossing of the Atlantic using this form of propulsion was made by the tanker *Auris*; in 1958, this ship was equipped with new and improved gas turbines. The first new ocean-going cargo ship to be powered by free piston engines was launched on Clydeside in January 1959. Research into the application of nuclear propulsion to merchant

ships is being undertaken with Government sponsorship and with the co-operation of the shipowning, shipbuilding and marine engineering industries. Plans for the building of large nuclear-powered tankers were submitted to the Admiralty in May 1959 by engineering and shipbuilding groups and the Atomic Energy Authority.

Age and Size

Some 25 per cent of the total gross tonnage is under 5 years old and a further 20 per cent is between 5 and 9 years old. Taking the tanker fleet separately, as much as 34 per cent is under 5 years old and a further 27 per cent is from 5 to 9 years old. An analysis of the merchant fleet by size is given in Table 23.

TABLE 23
SIZE DISTRIBUTION OF UNITED KINGDOM MERCHANT FLEET, 1958

Tonnage group	All ships		Tankers	
	No. of ships	Gross tons	No. of ships	Gross tons
100 and under 500 g.t.	1,833	458,707	175	46,327
500 " " 2,000 "	1,267	1,225,581	85	82,571
2,000 " " 6,000 "	667	2,710,581	37	118,503
6,000 " " 10,000 "	1,162	8,950,206	238	1,938,828
10,000 " " 15,000 "	358	4,080,395	214	2,448,609
15,000 " " 25,000 "	109	2,158,741	65	1,293,728
25,000 " " 30,000 "	17	466,828	—	—
30,000 g.t. and above	4	234,737	—	—
TOTALS ..	5,417	20,285,776	814	5,928,566

Source: *Lloyd's Register of Shipping*.

In 1958, the four ships of 30,000 gross tons and over were the *Queen Elizabeth* (83,673 g.t.), the *Queen Mary* (81,237 g.t.), the *Mauretania* (35,673 g.t.), and the *Caronia* (34,173 g.t.) all operating on transatlantic passenger services. Proposals made by the Cunard Company in 1959 to replace the two *Queens* (launched more than 20 years ago) are under consideration by the Government, which is being advised by a small committee. The *Windsor Castle* (38,000 g.t.), built for the service between the United Kingdom and South Africa, was launched in June 1959. Two passenger liners of over 30,000 g.t. were on order in June 1959: the *Canberra* (45,000 g.t.) and the *Oriana* (40,000 g.t.); both are being built for the service from Britain to Australia and across the Pacific to North America.

Employment of Shipping

The 20.3 million gross tons of shipping on the United Kingdom register at June 1958 included 17.2 million gross tons of trading vessels owned and registered in the United Kingdom¹; the usual employment of this fleet has been analysed by the

¹ The remaining 3.1 million gross tons included fishing vessels, tugs, river and estuary craft, Admiralty vessels (mostly tankers) not usually engaged in the commercial carriage of cargo, and 1.2 million gross tons of shipping registered in the United Kingdom but owned in other Commonwealth countries; this last figure included nearly half a million gross tons of tankers.

United Kingdom Chamber of Shipping as follows: 8.6 million gross tons were employed as ocean-going passenger and cargo liners; 2.8 million gross tons as ocean-going tramps; 4.6 million gross tons as ocean-going tankers; and 1.2 million gross tons as coasting and home trade.

SHIPOWNERS

About half of British-owned shipping registered in the United Kingdom consists of ocean-going passenger-cargo and cargo liners, mostly the latter. Practically all these ships are owned by large liner companies or groups of liner companies whose names are known throughout the world. Many of them operate wide networks of scheduled freight and passenger services which, between them, cover every ocean. The 2.8 million gross tons of ocean-going tramp ships are operated by a large number of private owners, some of them having only a small number of ships and some with only one ship. The cross-Channel and similar services operated by British Railways are listed on p. 368.

The many world-famous British shipping lines operating services on international routes include: the Cunard, to North America; the Royal Mail, to South America; the Blue Funnel, to Australia and the Far East; the Peninsular and Oriental (P. and O.) and the British India lines, to India and Australia; the Union Castle, to South Africa; Elder Dempster, to Africa; Furness Withy, to North America and the West Indies; the New Zealand line to North America, Australia and New Zealand; and Shaw Savill and Albion, to Australia.

About two-thirds of the total United Kingdom tanker fleet belongs to the oil companies, although there are a few important independent United Kingdom tanker-owning companies. A new type of specialised bulk carrier—the ore-carrier—is now coming into use on a substantial scale; some of the ore-carriers are partly owned by companies in the steel industry, but are managed and operated by shipping companies.

Unlike ship-owning companies in many countries, the United Kingdom ship-owners receive no subsidies or other direct financial assistance from the Government. The Government has, however, recognised that the United Kingdom shipping industry is faced with severe competition in a world market (especially from ships sailing under 'flags of convenience' with small tax liabilities and with no obligation to maintain proper standards of employment) and that the industry has found it increasingly difficult to build up finance for the replacement of obsolete ships. During the financial years 1956–59, the shipping industry was the only industry allowed to retain the 20 per cent investment allowance in respect of taxation, which was withdrawn from industry generally; the allowance was raised to 40 per cent in 1957 for capital expenditure on the construction of new ships.

SHIPPING ORGANISATIONS

The main organisations concerned with the activities, interests and common problems of the industry are as follows:

The Society of Lloyd's

This body, which was founded in the late seventeenth century, is an incorporated society of underwriters whose main business is marine insurance (see p. 442).

Lloyd's Register of Shipping

Lloyd's Register is an organisation (distinct from the Society of Lloyd's)

which surveys and classifies ships with particular regard to their safety and operational efficiency. It will accept responsibility for surveying and giving technical advice on vessels of all flags from the initial stages of building, at regular intervals during their service, and after casualties. A satisfactory Lloyd's classification is a guarantee to an underwriter that he may accept the risk of a vessel, and this forms a strong link between the Register and the Society of Lloyd's (see also p. 442).

Shipowners' Organisations

The representative bodies speaking for shipowners generally (excluding, for the most part, owners of fishing vessels) are the *Chamber of Shipping* and the *Liverpool Steamship Owners' Association*. The *General Council of British Shipping* co-ordinates the views of the shipping industry as a whole on all matters of major policy.

There are a number of local associations of shipowners centred around the main port areas, for example, the *Bristol Steamship Owners' Association*, the *London General Shipowners' Society*, and the *North of England Shipowners' Association*. Others represent companies specialising in a particular trade or type of cargo.

Employers' Organisations

The *Shipping Federation* and the *Employers' Association of the Port of Liverpool* are the employers' organisations concerned with labour relations and the regulation of employment throughout the Merchant Navy. They are responsible for the administration of the Merchant Navy Established Service Scheme, under which shipowners engaging crews for ships of 200 gross tons and above engage them through the Merchant Navy Establishment Administration unless they are prepared to offer two-year Company Service contracts. The Shipping Federation is also responsible for the day-to-day operation of the National Sea Training Schools set up for the purpose of training ratings for the deck and catering departments and as firemen.

Seafarers' Organisations

Shipmasters are represented by the *Mercantile Marine Service Association*; navigating officers, engineer officers, apprentices, cadets, pursers and ships' surgeons by the *Merchant Navy and Airline Officers' Association*; and radio officers by the *Radio Officers' Union*. Some uncertificated engineer officers are represented by the *Amalgamated Engineering Union*. The interests of the deck, engine-room and catering ratings are represented by the *National Union of Seamen*.

The National Maritime Board

The National Maritime Board is composed of equal numbers of representatives of the shipowners and seafarers and is responsible for all negotiations of wages and conditions of service in the Merchant Navy, although, except by special arrangement, National Maritime Board agreements do not apply to vessels of under 200 gross tons, or to certain other ships, including tugs and salvage vessels. Detailed working of the board is carried on by a number of 'panels' representing the various interests of those forming the seafarers' part of the board.

Conferences

British shipping companies operating liners have associated with each other and with the companies of other countries operating on the same routes in a series of 'conferences' designed to secure standardisation and stability of rates, and to maintain frequency and regularity of services. The essential principle of a conference is the establishment of a common tariff of freight rates or passenger fares from each port of departure. Each conference meets from time to time to review and

revise existing rates, or to compile new ones. Some of the conferences may be connected by rate agreements, or may have joined together to form wider groupings.

The Baltic Exchange

The Baltic Mercantile and Shipping Exchange, which originated in one of London's seventeenth-century coffee houses, is the world's largest market for the chartering of ships of all nationalities. 'Shipbrokers and merchants' representatives meet here to arrange the chartering of ships, or space in ships, for the carriage of all kinds of goods to and from all parts of the world. Other classes of business transacted on the Baltic Exchange include the chartering of air transport (see pp. 383-4) and the purchase and sale of grain and oilseeds.

RELATIONS WITH THE GOVERNMENT

The Ministry of Transport and Civil Aviation is the Government department responsible for most matters connected with merchant shipping. Under the Merchant Shipping Act of 1894 and subsequent legislation it administers many regulations for marine safety and welfare, for instance: certifying the load-line (or Plimsoll line) that ensures that a ship is not overloaded; ensuring that standards of safety are observed in ship construction; ensuring the provision of adequate life-saving, fire-fighting and radio equipment; and dealing with the discipline, professional standards, health and accommodation of seamen. Most of the work which these responsibilities entail is carried out by the officers of the Marine Survey and Mercantile Marine at the ports. There is also a Registrar-General of Shipping and Seamen in whose office at Cardiff a complete record of all British ships and seamen is kept. The ministry is represented on the Merchant Navy Welfare Board (see p. 360) and on the Merchant Navy Training Board (see p. 359). The ministry fosters the development and use of modern navigational aids.

The ministry is responsible for transporting by sea the men and materials of the armed forces and looks after ships that it owns or has chartered. It is also concerned with general shipping policy and the strategic implications of the Merchant Navy.

Abroad, certain parts of the Merchant Shipping Acts, in particular those provisions dealing with the engagement and discharge of crews outside the United Kingdom, are administered by H.M. Consuls and by officers of the Commonwealth and Colonial Governments.

The United Kingdom is a party to the International Convention for the Prevention of the Pollution of the Sea by Oil which came into force in 1958. The nations which have ratified this convention agree to prohibit their national fleets from discharging oil within 50 miles of any coast and also in extensive areas of the Atlantic Ocean and the North Sea. British ships registered in the United Kingdom were already prohibited from discharging oil within a wide zone of the sea around the United Kingdom under the Oil in Navigable Waters Act, 1955, which is administered by the Ministry of Transport and Civil Aviation. The discharge of oil from any source into United Kingdom territorial waters and harbours was first prohibited in 1922.

The United Kingdom is a member of the United Nations Intergovernmental Maritime Consultative Organisation (IMCO), whose first assembly was held in London in January 1959.

Lighthouses, Pilotage and Rescue

The Ministry of Transport and Civil Aviation administers the Coastguard Ser-

vice. This is primarily a life-saving organisation which keeps watch at danger points around the coast for vessels in distress and renders assistance either by rocket life-saving apparatus or by informing other authorities who may be able to give help. There is close liaison between the Coastguard Service and the Royal National Lifeboat Institution. The latter maintains lifeboats around the coast of the United Kingdom; it is supported entirely by voluntary subscriptions, and depends largely for its operation on voluntary workers. From its foundation in 1824 to the end of 1958, the Royal National Lifeboat Institution rescued 81,859 people. Lifeboats were launched 714 times in 1958, and rescued 461 people; on nearly 900 occasions in the twelve months to March 1959, life-saving action was taken by the Coastguard Service.

The general lighthouse authority for England and Wales, the Channel Islands and Gibraltar is the *Corporation of Trinity House*, which received its first Royal Charter in the sixteenth century and is administered by a Board of ten Elder Brethren elected from the Royal Navy and the Merchant Navy. It is also the chief pilotage authority in the United Kingdom, having the management of all matters relating to pilots and pilotage in the London area, the English Channel and certain other coastal districts of the United Kingdom. Lighthouses in Scotland and Ireland are the responsibility respectively of the Commissioners of Northern Lighthouses and the Commissioners of Irish Lights. The Ministry of Transport and Civil Aviation also has certain responsibilities in connection with lighthouses and pilotage.

THE MERCHANT NAVY

The number of masters, officers and men serving in 1958 in British ships on articles of agreement opened or closed in the United Kingdom was about 150,000.

Training

Nautical training in the United Kingdom has two distinct objectives, first to give intending entrants into the Merchant Navy an introductory training before going to sea—this is commonly known as ‘pre-sea training’—and secondly, to prepare those who have already performed the requisite sea-service, qualifying them for admission to the examinations, for the various statutory and other certificates granted by the Ministry of Transport and Civil Aviation. Pre-sea training is not compulsory for those who go to sea as apprentices or cadets but most shipping companies will, in practice, accept only those who have undergone such a course. There are a number of residential and non-residential training establishments.

The *Merchant Navy Training Board* promotes the instruction and studies at sea of apprentices and cadets who are preparing for their examinations for certificates of competency as second mate.

The Ministry of Transport and Civil Aviation holds examinations for, and issues certificates of competency to, ships’ officers as master, first mate and second mate of foreign-going ships, or master and mate of home trade ships and as first class engineer and second class engineer. Officers may not normally serve on board ships in these grades unless they hold the appropriate, or a higher certificate.

Sea-going engineer officers usually receive their basic training in engineering by serving a suitable apprenticeship of not less than four years in engineering workshops ashore, although part of this period may be spent at approved courses in mechanical engineering. An alternative scheme of training has, however, recently been introduced under which shipping companies themselves select apprentices for a special course of training consisting of a two-year diploma course in a technical college, followed by eighteen months’ training at sea and finally twelve months’

training in an engineering workshop ashore. Sea-going engineer officers are first employed as junior engineers: they become eligible to take examinations for second and first class certificates of competency after performing periods of qualifying sea service.

Radio officers are required to hold certificates of proficiency in wireless telegraphy issued by the Postmaster General on the results of an open examination.

All boys who wish to join the Merchant Navy as deck or junior catering ratings must undergo a course of pre-sea training. The majority receive their training at the National Sea Training Schools but courses are also provided by certain private organisations and by a number of local education authorities.

A seaman may not be rated as A.B. (Able Seaman) in United Kingdom registered ships unless he holds a certificate of competency as A.B., granted by the Ministry of Transport and Civil Aviation, or an equivalent certificate. To obtain this certificate a seaman must, among other qualifications, have served three years at sea on deck, have attained a certificate of proficiency as lifeboatman and have passed a qualifying examination.

Seamen qualify by seniority for promotion to the rating of petty officer. Service as a deck rating qualifies for the purpose of admission to the examination for a second mate's certificate.

Conditions of Employment and Welfare

Wages and conditions of employment are negotiated by the National Maritime Board (see p. 357). Minimum wages and holidays with pay are guaranteed for both officers and ratings. Moreover, the Merchant Navy Established Service Scheme, introduced by the board in 1947, has removed a great deal of the uncertainty formerly associated with a seafaring life. Officers and men can now take two-year contracts, not only with individual shipping companies but with the industry as a whole, and get special benefits, in addition to the normal unemployment insurance benefit when they are ashore between voyages.

The *Merchant Navy Welfare Board*, on which are represented officers' and seamen's unions and associations, shipowners, voluntary societies, the Ministries of Transport and Civil Aviation, Labour and National Service, Pensions and National Insurance, and the Colonial Office, has been responsible since 1948 for the control and co-ordination of the welfare services for merchant seamen in the United Kingdom and of British merchant seamen abroad.

PORTS

There are over 300 ports in the United Kingdom. The eleven largest are shown in Table 24, which lists them in order of tonnage of shipping arriving and departing and does not relate to the volume of cargo handled. Most ports, other than those owned by the British Transport Commission, are represented on the *Dock and Harbour Authorities' Association*, formed in 1917 to represent the common interests of port authorities in their relations with Government, shipowners and traders.

The Port of London, with 69 miles of waterway, over 4,000 acres of dock estate and 36 miles of deep-water quays, is the largest port in the Commonwealth, and with New York and Rotterdam is one of the three largest ports in the world. Goods of every kind, from meat to marble, from plywood to perfume, pass through the docks; some 55 million tons of cargo were handled in 1958. Imports are distributed all over the United Kingdom, though the port supplies, primarily, Greater London and the home counties. In April 1959, an information service, installed at a cost of nearly £80,000, was opened at Gravesend to assist ships' masters entering the river Thames.

Liverpool—with *Manchester*, an inland city made into a port by the construction of the Manchester Ship Canal—serves the industrial Midlands, Lancashire and Yorkshire. Grain is prominent among the imports of Liverpool, which, including Birkenhead on the opposite bank of the Mersey, is the second largest milling centre in the world. Tobacco is another major import and is stored in what is probably the world's largest warehouse. Liverpool is also important for transatlantic passenger traffic and short sea-route and coastal trading. Manchester's chief imports are raw cotton and petroleum.

TABLE 24
PORT ARRIVALS AND DEPARTURES, 1958
(With Cargo and in Ballast)

Thousand tons net

Port	Foreign Trade	Coasting Trade	Total
London	56,182	22,197	78,379
Southampton	36,540	10,000	46,540
Liverpool	30,449	7,102	37,551
Tyne ports	7,364	8,223	15,587
Manchester (including Runcorn)	12,582	2,976	15,558
Glasgow	10,817	4,174	14,991
Belfast	2,802	11,686	14,488
Hull	8,560	2,980	11,540
Bristol	8,460	2,954	11,414
Swansea	6,866	3,030	9,896
Middlesbrough	6,572	2,836	9,408
TOTALS ..	187,194	78,158	265,352
TOTALS ALL PORTS ..	253,018	149,972	402,990

Source: *Board of Trade Journal*.

Southampton, largest of the Channel ports, is the chief port for ocean passenger traffic. It owes its importance to its double tides and easy access from London. A considerable volume of oil is handled for the refinery at Fawley.

Newcastle upon Tyne and the other Tyne ports serve the industrial north-east of England and comprise the most important coal-shipping and largest ship repairing centre in the country.

Hull, on the Humber estuary, serves particularly the industrial centres of Yorkshire and the Midlands. *Middlesbrough* imports iron ore for, and exports rolled steel from, the local steel industry.

Swansea has the largest trade of the group of ports serving South Wales. As well as coal, Swansea exports the steel and tinplate manufactured in its immediate neighbourhood, but its rapidly increasing importance derives largely from the oil which it imports and exports for local refineries.

Bristol and *Avonmouth* serve the industrial Midlands as well as the city of Bristol itself, and also have a large coastal trade.

Glasgow, the principal Scottish port, serves as an entrepôt centre for the industrial area of central Scotland.

Grangemouth, also in Scotland, handles oil to and from the local refinery, and also imports timber, iron ore, cement, paper-making materials and general cargo.

Belfast is the principal port of Northern Ireland and handles the main Irish Sea traffic.

Ownership

The ports, in some cases docks only, previously owned by the main-line railway companies are now under national ownership and are administered by the British Transport Commission (see pp. 364-6). The commission owns and manages some 30 per cent of Britain's dock accommodation with a total of over half a million feet of quays. A few of the commission's ports are docks developed by former canal undertakings, such as the Aire and Calder Navigation which developed Goole. The rest are those formerly owned by the railways. In some cases—e.g., at Southampton and Middlesbrough—the railways owned the main docks in ports where the statutory authority was a harbour board. In other cases—e.g., at Grangemouth, Garston and Grimsby—the port was largely developed by the railway company which was itself the statutory harbour authority. Some railway-owned ports were, and still are, mainly used for the railways' cross-Channel services: Folkestone, Harwich, Newhaven, Fishguard, Holyhead, and Heysham are in this category. Among other ports owned by the commission are Hull, Swansea, Newport, and Cardiff. In 1958, shipping arrivals and departures at the commission's docks, harbours and wharves, at which 14,000 were employed at the end of that year, totalled over 81½ million net tons, and the total cargo handled was about 47½ million tons.

Other ports are controlled by a public trust on which are represented users of the port (such as shippers, importers and shipping companies) and other bodies such as Government departments and local authorities. Examples are London (controlled by the Port of London Authority), Liverpool (Mersey Docks and Harbour Board), Belfast (Belfast Harbour Commissioners) and Glasgow (Clyde Navigation Trust). *The Port of London Authority* has 28 members. Ten of the members are nominated as follows: by the Admiralty (1), the Ministry of Transport and Civil Aviation (2), the London County Council (4), the Corporation of the City of London (2), and the Corporation of Trinity House (1). Eighteen of the members represent various port users: shipowners (8), merchants (8), owners of river craft (1), and public wharfingers (1). The authority's duties include the maintenance of adequate river channels, the regulation of traffic, the provision and upkeep of moorings and the licensing of wharves and structures in the area under its control. A few ports—Bristol is the most important example—are owned by the town or city council and controlled entirely by a committee of the council.

Finally, there are about 100 ports which are privately owned. Manchester is the only major port so owned—by the Manchester Ship Canal Company—and here the Manchester City Council exercises considerable control by appointing 11 of the company's 21 directors.

The powers and responsibilities of the port authorities are, in the main, set down in private Acts of Parliament which relate specifically to the ports concerned.

Labour

There are about 150,000 people employed in the operation of ports in the United Kingdom. Just under half of these are administrative, clerical and technical staff, and pilots, lightermen and customs officials. Over half are the dock workers (formerly and still popularly called 'dockers') who do the physical work of handling cargo.

Shipping arrivals and departures do not all conform to a regular schedule, with the result that there is sometimes too much work for the dock workers available, sometimes too little. Dock labour was therefore largely casual labour until 1941, when war-time schemes were introduced to control the port registers of employers and workers. The war-time arrangements were superseded in 1947 by a permanent scheme administered by the *National Dock Labour Board*, which consists of a chairman, vice-chairman, and eight members appointed by the Minister of Labour and National Service, four to represent employers and four to represent employees. Workers on the board's registers now receive a guaranteed minimum wage even when there is no work available. A pension scheme for dockers has been agreed in principle between the National Association of Port Employers and the trade unions.

Tanker Terminals

Most of the oil tankers coming to the United Kingdom to discharge crude oil are berthed at special tanker terminals near the oil refineries which are owned and operated by the oil companies. Existing tanker terminals are at Thameshaven, Shellhaven, Coryton and the Isle of Grain, all on the Thames estuary; at Fawley on Southampton Water; at Eastham and Stanlow on the Manchester Ship Canal; at Heysham, Morecambe Bay, Lancashire; and at Bowling on the river Clyde and Ardrossan on the Firth of Clyde. A new oil terminal at Finnart, on the Firth of Clyde, was opened in June 1959. Built at a cost of £2 million, it is the first terminal in Europe capable of taking 100,000 ton tankers at any stage of the tide. The Finnart and Bowling terminals on the west coast of Scotland are connected by pipeline to the oil refinery at Grangemouth on the Firth of Forth, on the east coast of Scotland. There are other tanker berths on the rivers Tyne, Tees and Humber on the east coast of England, and in several main ports, such as Swansea.

Several tanker terminals are either under construction or are planned, including one at Hook on Southampton Water for tankers up to 60,000 deadweight tons; one at Tranmere, on the river Mersey, for tankers up to 65,000 d.w.t.; and two at Milford Haven, in south-west Wales, for tankers up to 100,000 d.w.t. Milford Haven is being developed by the British Petroleum and Esso oil companies as a major oil importing centre. A Milford Haven Conservancy Board has been set up by the Government to exercise general control over navigation in the port area.

The capacity of existing terminals on the Thames and at Southampton is also to be increased by dredging. As some of the larger existing tanker terminals are unable to berth fully laden oil tankers of more than 32,000 d.w.t., these new projects have assumed great importance in meeting the increased size of tankers.

INLAND TRANSPORT

The dense passenger and freight traffic of Great Britain¹ is carried mainly by road and rail, although coastal shipping and, to a lesser extent, inland waterways play an important part in carrying freight, particularly bulk cargoes. Passenger and freight traffic on the domestic services of British airlines is steadily increasing. There are in Great Britain some 19,000 route-miles of railways (51,100 track miles) and just over 190,000 miles of road, of which only about one-quarter may be classed as main roads. The railway network was developed mainly in the nineteenth century from 1840 onwards (and there are now more railways per square mile in Britain than in any other country, except Belgium).

¹ For an account of inland transport in Northern Ireland, see pp. 376-7.

In 1958, the number of passenger journeys made by public transport (road and rail) in Great Britain was 15,100 million, of which 1,100 million were made by rail. In addition, in the summer of 1958, some 4½ million motor cars and 1½ million motor cycles (including about half a million scooters) were licensed for use on the roads. The average annual mileage of most of the cars is estimated to be between five and ten thousand. Journeys by public transport are mainly short and a great many of them are to and from places of work. The resultant concentration of travel in the morning and evening 'rush hours' constitutes a formidable problem in London and other large centres of population.

A general picture of the domestic goods transport system in Great Britain is provided by the results of a sample survey of goods transport by road made in April 1958 by the Ministry of Transport and Civil Aviation, the first such survey for six years. According to this survey, about three-quarters of the total tonnage carried in 1958 (estimated at 1,320 million tons) went by road, while in terms of ton-mileage¹ the proportion was about 45 per cent. The railways accounted for 19 per cent of the total tonnage and 35 per cent of the ton-mileage. The proportions for coastal shipping were 4 per cent and 35 per cent, respectively. Although the volume of goods transported by the railways in 1958 was reduced considerably by the fall in demand for coal and iron and steel, the survey observed that it was clear that, whatever unit of measurement was used, road transport was now the major means of inland carriage of goods. The 1952 survey had shown that the railways were responsible in that year for 43 per cent of the ton-mileage and road transport for 37 per cent.

THE BRITISH TRANSPORT COMMISSION

Today the British Transport Commission has an annual turnover of £730 million and is the largest single employer of labour in the country, employing some 774,000 men and women. Its present role and structure are the result of a series of Transport Acts passed since 1947.

The Transport Acts of 1947, 1953 and 1956

On 1st January, 1948, in accordance with the provisions of the Transport Act of 1947, most of Great Britain's inland transport system passed into public ownership. On that date, the railways, all railway-owned steamships, docks, hotel and road transport interests, most of the country's canals (including all those owned by the railways) and the whole of London's passenger transport system came under the control of the British Transport Commission, a newly created public authority, which was given the duty of providing an efficient, adequate and integrated system of public inland transport and port facilities for passengers and goods. In addition, the commission was to arrange for the gradual acquisition of privately owned long-distance road haulage firms. Road passenger transport outside London was not taken over, but the commission was given power to prepare area schemes for co-ordinating passenger services by road and rail, including power to acquire road passenger undertakings for this purpose. A considerable amount of road haulage, several waterways and many docks were left outside the commission's scope.

The Conservative Government which took office in 1951 announced a new policy for the operation of public transport, including decentralisation of the railway

¹ Ton-mileage is calculated by multiplying the tonnage carried by the actual distance it was transported.

administration, greater freedom to adopt normal commercial practice (particularly in charging), the partial return of long-distance road haulage to private enterprise, and the revocation of the commission's power to make schemes for the co-ordination of road and rail passenger services. The policy was put into effect by the Transport Act of 1953, and the actual reorganisation of the British Transport Commission was completed by 1st January, 1955. A further Act, the Transport (Disposal of Road Haulage-Property) Act, 1956, brought to an end the denationalisation of road haulage.

Today the British Transport Commission resembles in organisation, purpose and status a large-scale commercial corporation. It is in keen competition with public and private transport by road, sea and air.

Present Organisation

Under the 1947 Act, the British Transport Commission is responsible to the Minister of Transport and Civil Aviation who, in turn, is responsible to Parliament. The minister appoints the members of the commission (with the maximum membership of 14 members and a chairman) and is empowered to give general directions to the commission in the national interest and to approve the outline of programmes of major development and of training, education and research.

The commission itself is a policy-making and not a managing body. It works through six policy-making committees,¹ each dealing with one particular subject in relation to all the commission's activities, and through sub-commissions¹ which are not policy-making but each of which takes a special interest in the activities of one of the seven divisions which carry on the various activities of the commission. These seven divisions are: British Railways, British Road Services, Tilling (bus) Group, Scottish Omnibus Group, British Transport Docks, British Waterways, and British Transport Hotels and Catering Services.

In the London area, road passenger transport and the underground railways are operated by the London Transport Executive (see pp. 375-6), which was established as an agent of the British Transport Commission by the Transport Act, 1947.

Consultation with coastal shipping operators is provided by the Coastal Shipping Advisory Committee, which was set up under the 1947 Act to consider, and from time to time to report to the minister on, all matters jointly affecting the interests of the British Transport Commission and those of coastal shipping. The 1953 Act extended the scope of the committee's work to include road haulage. The members of this committee are appointed by the minister from the commission and from among representatives of coastal shipping after consultation with interests concerned. The commission also consults with the operators of coastal liners on questions of rates and charges at the Coasting Liner Conference.

Finance

An annual report and statement of accounts is submitted to the minister, who lays it before Parliament. The British Transport Commission is under obligation to cover its outgoings, taking one year with another, but during the present period of railway modernisation it is permitted to carry forward the deficits arising on British Railways. Its deficit in 1958 amounted to £90.1 million, bringing the accumulated deficit for the three years 1956-58 to £207 million. The commission is confident, however, that the various corrective measures that it has in hand, particularly projects that will be completed early in the railway modernisation

¹ These committees and sub-commissions are mainly composed of members of the British Transport Commission.

programme, will bring the financial position into approximate balance by 1963 or 1964. Meanwhile, in order to meet financial needs during the critical years of reconstruction, the Government, under the Transport (Railway Finances) Act, 1957, and the Transport (Borrowing Powers) Act, 1959, is making special advances to the commission up to £400 million to meet the annual revenue deficits for this limited period. The advances made are liable to interest and will be repaid in instalments. The commission's ordinary borrowing powers (i.e. excluding those to meet deficits) are limited to £1,200 million.

Gross receipts from the commission's principal carrying activities in 1958 were: passenger traffic, £278 million; freight traffic, £381 million; and miscellaneous, £16 million. In addition, gross receipts from other principal activities amounted to £53 million. Interest on British Transport Stock and other interest charges amounted to £72 million. Fixed assets at the end of 1958 were valued at £1,728 million, of which £1,518 million related to British Railways.

Transport Tribunal

The Transport Tribunal, set up under the 1947 Act, has jurisdiction over the charges schemes which govern the maximum charges which the British Transport Commission may make on British Railways, on the road and rail services provided by the London Transport Executive, at its docks, and by tolls for the use of inland waterways. The Transport Tribunal replaced the Railway Rates Tribunal and has also taken over responsibilities from certain other statutory bodies. Appeals arising from applications for road haulage (goods vehicles) licences are heard by the tribunal and it has other duties relating to harbours and canals.

Transport Users' Consultative Committees

There are eleven Area Transport Users' Consultative Committees and a Central Transport Consultative Committee for Great Britain, which were set up, under the 1947 Act, to give transport users an opportunity of putting forward criticisms and suggestions for improving the commission's transport services. The members of these committees are appointed by the minister (after consultation with the various organisations concerned) to represent commerce, industry, agriculture, labour, local authorities and the British Transport Commission itself. The area committees in England report to the central committee, which reports to the commission and the minister, who may give directives to the commission upon any matter dealt with as a result of a recommendation of the central committee. Since 1953, the Scottish and Welsh committees also report direct to the minister. Matters dealt with include the British Transport Commission's proposals for closing branch railway lines, withdrawing passenger train services, closing stations, and complaints by the public of inadequacy of services or facilities.

RAILWAYS

Britain was the pioneer of railways. The opening of the Stockton to Darlington Railway in 1825, and the Liverpool and Manchester line in 1830, when George Stephenson's famous 'Rocket' locomotive was used, began a century of widespread railway development. The great period of railway building was from 1840 to 1875, with a short lull following the collapse of the speculative railway boom in 1846. In the same year, an Act of Parliament prescribed a standard gauge of 4 feet 8½ inches for all new railway lines except extensions of the Great Western Railway, which then had a gauge of 7 feet and was not converted to the standard gauge until much later. The Railway and Canal Traffic Act of 1888 drew up a standard freight

classification and schedules of maximum freight charges which came into operation in 1893.

During the first world war, the railways came under centralised Government direction through a Railway Executive Committee. This experience emphasised the need for concentration and a reorganisation of the whole rail system. The Railways Act of 1921 amalgamated 123 private companies into four large groups: the London, Midland and Scottish; London and North Eastern; Great Western; and Southern. In the 1920s and 1930s the railways suffered from the prolonged industrial depression and the growing competition from road transport. The causes of road competition were twofold: first, motor transport often offered cheaper and better facilities; secondly, the statutory regulation of the railways' charging system resulted in the loss of some lucrative traffic and the forced retention of unprofitable traffic.

In 1938, the railways made proposals for relief from statutory regulation of charges, but the outbreak of war in 1939 postponed action and the railways again became controlled by the Government.

Organisation under Public Ownership

The Transport Act of 1947 brought the railways under public ownership as a single enterprise. British Railways, grouped in six regional sub-divisions, operated under the overall management of a Railway Executive established as the agent of the British Transport Commission.

The 1953 Transport Act abolished the Railway Executive and provided for a reorganisation of the administration. The operation of British Railways is at present in the hands of six area boards (the areas corresponding with the former regions), which leave day-to-day management to the general managers of the areas. Important matters affecting general policy are reserved to the British Transport Commission and are dealt with by the British Railways Division and the Railways Sub-Commission.

Statistics of British Railways

Today, the services of British Railways' Southern Region alone carry annually almost the same number of passengers as all the Class I railways of the United States of America, although, of course, the average length of journey is much less. The urban and suburban passenger commuting services for London, and other large conurbations carry about 2½ million passengers a day, mainly to and from their work in brief rush hour periods. These services account for about half the annual total of 1,100 million passengers on British Railways. The railways are also indispensable to a great part of the basic freight traffic. Every day, British Railways haul a total of nearly 59 million ton-miles of freight; the flexibility of their operations enables them to deal with sudden heavy movements of bulk freight such as coal, or crops at harvest time. In 1958 British Railways carried a total of 243 million tons of freight.

The following figures summarise the numbers of staff employed and vehicles, ships and track owned by British Railways at the end of December 1958:

Staff, total number	..	..	..	..	..	550,123
including: Administrative, technical and clerical	..					74,501
Operative	..	..	..	..	..	276,406
Maintenance and construction	..				..	186,266

Permanent Way (standard gauge)

Railroad mileage (incl. electrified)	..	..	..	18,848
Track mileage (incl. electrified)	..	..	..	50,914

Locomotives						
Steam	..	..	..	..	..	16,108
Electric	..	..	..	..	..	72
Diesel	..	..	..	..	..	242
Diesel-electric	..	..	..	..	..	958
Gas turbine electric	..	..	..	..	..	1
Passenger carriages (a)						
Locomotive-hauled	..	..	..	..	..	34,325
Diesel multiple-unit stock	..	..	..	..	..	2,417
Electric multiple-unit	..	..	..	..	..	5,261
Freight vehicles	..	..	..	..	..	1,020,197
Ships (b)	..	..	..	..	..	121
Net tonnage of ships	..	..	..	..	..	77,405
Road vehicles	..	..	..	..	..	45,000

(a) Including rail motor vehicles.

(b) Including 7 jointly owned and 3 operated but not owned. British Railways operate services on twelve routes to the Continent, including two train-ferry services, Harwich-Zeebrugge and Dover-Dunkirk. Services are also operated across the Irish Sea, to the Channel Islands and to the Isle of Wight, and on coastal waters and lakes.

At the end of 1958, the British Transport Hotels and Catering Services owned refreshment rooms at 378 stations, and also 38 hotels. At 81 of the stations, tenants operated the refreshment facilities.

Development Plans

By the end of 1958, eleven years after the British Transport Commission came into operation, capital expenditure on British Railways amounted to about £667 million. Some of this was accounted for by renewals, including arrears inherited from the past. The difficulties of the 1930s, the strain of the war years and the numerous post-war claims on national resources had prevented any large schemes of railway modernisation and the maintenance of an adequate replacement programme. This past lack of investment is being remedied by a 15-year modernisation and re-equipment plan, announced by the British Transport Commission in January 1955, which is designed to transform virtually all the services offered by British Railways.

The original cost of the plan was estimated at £1,200 million, but it has since been re-assessed at £1,500 million. In a re-appraisal of the plan, announced in July 1959, the commission stated that additional items estimated at £160 million would bring the total cost to £1,660 million. It envisaged a greater concentration of expenditure, averaging about £190-210 million a year, in the years 1959-63. By about the end of 1963, a working surplus of between £50 million and £100 million a year is expected, against which interest charges will amount to about £85 million. The programme is being financed partly from internal sources and partly by borrowings.

Major features of the programme include the re-modelling of passenger operations to ensure fast, clean, regular and frequent services (electric or diesel) in all the great urban areas, to accelerate inter-city and main-line trains and to provide economic services on other routes. Freight services are being completely re-cast to increase efficiency, for example, by means of express freight trains and special services for export goods between manufacturing centres and the London docks.

The plan heralds the end of steam traction and aims to carry out as much electrification as possible within the 15-year period. Electrification is going ahead much faster than originally expected, chiefly due to the adoption of the 25kV a.c. system—a revolutionary change. It has been decided to electrify the route from London (Euston) to Birmingham, Manchester and Liverpool by 1964, and later, the route from London (King's Cross) to Leeds; to extend electrification from London (Liverpool Street) as far as Ipswich and Harwich; to complete the electrification of the Southern Region east of a line from Portsmouth to Reading (a £25 million scheme which is part of this plan, was completed in June 1959), and to carry out additional suburban electrification for London and Glasgow.

On other main lines, diesel locomotives are being introduced as rapidly as possible. Over 100 diesel main-line locomotives were delivered by the end of 1958 and nearly 400 more were expected to come into service during 1959; about 2,500 such locomotives are to be in operation by the end of the plan period. It was expected that some 3,000 multiple-unit diesel vehicles would be operating on branch lines and stopping services by the end of 1959.

A co-ordinated effort to improve the permanent way is being made in all regions. Modern signalling equipment, which has already been installed at York, Cowlairs (Glasgow), Newcastle and St. Pancras (London), is now being provided at many other places including Manchester (Victoria). Continuous brakes are being fitted to freight wagons to enable freight trains to operate at higher speeds. Big new marshalling yards are being constructed, for example, in Fife to serve the new coalfields, in South Wales for the growing steel industry, and in east London to cater for recent industrial development. New or modernised freight depots are being built at Liverpool, Lincoln, Barking and Peterborough. Some existing depots and marshalling yards and several hundred small stations are being closed.

Passenger coaches of improved design and construction and with a better range of amenities are being introduced. In 1960, five diesel-electric *de luxe* trains will come into operation on routes from London to Manchester, to Birmingham and Wolverhampton and to Bristol. The plan has allocated some £55 million for modernising some of the many passenger stations (there are over 5,200 stations in Great Britain). Banbury, Barrow-in-Furness and Plymouth are examples of passenger stations that are being rebuilt. New signalling devices (including high-intensity colour-light signals and automatic warning control) are being introduced to increase safety on the railways.

ROADS

During the Roman occupation of Britain a military road system was constructed, but for centuries after the Romans left Britain in A.D. 410, road works were carried out on a local basis and with little regard to long distance traffic. During the eighteenth and early nineteenth centuries a system of road maintenance through private enterprise in the form of turnpike trusts became widespread. The maintenance of a length of road was placed in the hands of a trust, made up of private individuals, empowered to levy tolls at the gates it erected at the limits of its jurisdiction. The same period was also notable for the major improvements in road construction carried out by Thomas Telford and John McAdam who laid the foundations of modern road engineering practice. A period of intensive railway development then intervened and the competition from the railways caused the collapse of the turnpike trusts. Legislation passed in the latter half of the nineteenth century vested the responsibility for roads with the county, rural district and urban councils. Construction of new roads was confined almost entirely to the

expanding towns. The advent of the motor vehicle made it necessary for the Government to set up a central road authority. Accordingly, the Road Board was established by the Development and Road Improvement Funds Act of 1909. In 1919, the board's responsibilities were taken over by the newly established Ministry of Transport.

In 1958, Great Britain had 191,146 miles of public highway, over two miles for every square mile of territory. There were 8,309 miles of trunk roads, 19,706 miles of Class I roads, 17,603 miles of Class II roads, 48,853 miles of Class III roads, and 96,675 miles of unclassified roads. Roads are classified according to their traffic value, those of purely local traffic importance remaining unclassified. On maps and signposts the trunk and Class I roads can mostly be identified by the letter 'A' in front of a route number, and Class II roads by the letter 'B'. Trunk roads are the main arteries of national traffic and the whole cost of their upkeep is met from Exchequer funds. The Minister of Transport and Civil Aviation is the highway authority for trunk roads in England and Wales and administers expenditure on these roads. The highway authority for Class I, II, and III roads is, in general, the council of the county or county borough in whose area the road lies. The minister makes grants towards approved expenditure on construction and maintenance of these roads at the rate of 75, 60, and 50 per cent, severally, according to the class of road. Other public roads are the responsibility of the local authority. The Secretary of State for Scotland has the same responsibilities for roads in Scotland.

Development

The heavy demands upon the national economy since the end of the second world war restricted expenditure on major improvements and new construction. In the early post-war years, the bulk of expenditure on roads was devoted to maintenance and repair, but since 1953 there has been an increased emphasis on new works. Under the Special Roads Act of 1949, the minister has powers to construct special roads for certain categories of traffic. The building of trunk roads is carried out mainly by private firms under contract to the local highway authorities, who act as agents of the ministry.

In the four years 1955-58, an annual average of just under £14 million was spent on new road construction and major improvements. In 1959, estimated expenditure totalled £55 million, rising to about £65 million in 1960, and is expected to be some £75 million in 1961. From 1962 onwards, it is planned to spend about £70 million each year on road works. All these figures include provision for road works in Scotland but not the complementary expenditure by local authorities.

It is planned first to construct, as quickly as possible, the initial stage of a national network of modern trunk routes, in many cases confined to motor traffic only; secondly, to clear away the worst bottlenecks in urban areas and thus to give free outlets from the big cities and from other main sources of traffic to the trunk routes; and thirdly, to press forward with the maximum amount of smaller road works all over the country. Priority is to be given to five major routes: a trunk road from London to Newcastle, based on the Great North Road, on which works estimated to cost £23 million are being undertaken in 1959-60; a motor road from London to Birmingham and Yorkshire; trunk roads from London to the south-east by-passing the Medway towns, and Maidstone and Ashford; a road from the industrial Midlands to the South Wales ports; and a road from London westwards to London Airport, the west of England and South Wales. In Scotland, the programme includes the reconstruction of the Glasgow to Stirling and Glasgow to Carlisle trunk roads. The motor road from London to Birmingham is Britain's first full-length motorway.

Work is in progress on the Ross Spur motorway which will form part of the link between the South Wales ports and the industrial Midlands, and on the Great North Road which is being modernised. The Maidstone by-pass on the London to Folkestone trunk road is due to be completed by mid-1960. The first road to be built to motorways standard, the Preston by-pass, was opened in December 1958. Another shorter road, the Lancaster by-pass will be ready early in 1960; the first 73 miles of the Yorkshire motorway were completed in October 1959. The first county motorway, the six-mile-long Stretford-Eccleß by-pass, including a new high-level bridge across the Manchester Ship Canal and the construction of the third largest steel arch bridge in the world, between Runcorn and Widnes, is expected to be completed in 1960. The £11 million Dartford-Purfleet road tunnel under the river Thames, begun in 1957, will be ready for traffic by 1962.

In Scotland, the building of the Whiteinch Tunnel under the river Clyde, at a cost of £6.4 million, began in 1957 and is due to be completed in 1962; the construction of a new road bridge across the Firth of Forth began in 1958 and is expected to be completed in 1963, at an estimated cost of £16 million.

ROAD TRANSPORT

In 1958, there were nearly 8 million motor vehicles licensed to use Great Britain's roads. Of these, some $4\frac{1}{2}$ million were motor cars, about $1\frac{1}{2}$ million were motor cycles, including scooters, $1\frac{1}{4}$ million were goods vehicles and 97,000 were public road passenger vehicles (i.e. buses, trolleybuses, trams and taxicabs).

The first world war greatly stimulated the development of motor vehicles, and road transport began to make itself felt as a serious competitor of the railways. The first step towards Government regulation of public road transport was the passing of the London Traffic Act of 1924, which gave the Minister of Transport power to control the number of buses and their journeys in London; this was followed, in 1933, by the setting up of the London Passenger Transport Board (see p. 375). In 1928, a Royal Commission was appointed to examine the problems that had arisen out of the growth of motor traffic. The recommendations of this commission led to the introduction of further legislation.

The Road Traffic Act, 1930, removed the old system of the licensing of public service (i.e. passenger) vehicles by local authorities and set up instead traffic areas, of which there are now eleven, covering the whole country and each under the control of three traffic commissioners (except for the London metropolitan area which has one) appointed by the minister. The commissioners regulate, by means of a licensing system, all public road passenger transport services, and sanction routes and timetables in order to secure proper co-ordination of services and to eliminate unnecessary competition; they also control fares. Competing operators and local authorities are entitled to raise objections concerning applications to the commissioners for new licences or the renewal of existing licences.

Organisation of Road Haulage

The Road and Rail Traffic Act, 1933, based upon the recommendations of the Royal Commission and of an experts' report (the Salter Report) of 1932, established a system of licensing for road haulage vehicles, which is still in operation, designed to restrict vehicle operations to approved needs and to eliminate wasteful competition. A licence has to be secured from the licensing authority (who is, in fact, the chairman of the appropriate body of traffic commissioners) before a goods vehicle can be used on the road. There are three types of licence: the 'A' licence for general public haulage; the 'B' licence for public haulage limited to certain

goods, or certain areas and covering also the carriage of the licensee's own goods; and the 'C' licence for the carriage by traders solely of their own goods. The holders of 'A' and 'B' licences are bound by regulations concerning the fitness and loading of vehicles, the keeping of records and the pay and hours of their employees. Applications for 'A' and 'B' licences are examined by the licensing authorities to see if they are necessary in view of existing transport services already available, and competitors may raise objections. There is a right of appeal to the Transport Tribunal against the decision of the licensing authorities. The 'C' licence is granted on application, as of right, but the holder is bound to keep records, to observe statutory driving hours, and to fulfil certain other conditions.

Under the Transport Act of 1947, the British Transport Commission took over 'A' and 'B' hauliers predominantly engaged on long-distance haulage. Vehicles operating under 'C' licences and those used for carrying certain specialised traffic were not affected by the Act. After the change of Government in 1951, the Transport Act of 1953 required the commission to dispose of the bulk of its road haulage undertaking. In 1956, this process was halted by the Transport (Disposal of Road Haulage Property) Act, which enabled the commission to retain under its control more vehicles than were permitted under the 1953 Act. Altogether, the commission disposed of 20,000 vehicles. Since September 1956, British Road Services (BRS) have been conducting their business through the medium of five companies which together own about 14,300 vehicles: British Road Services Ltd. (general haulage); BRS (Pickfords) Ltd. (special traffic and some contracts); BRS (Contracts) Ltd.; BRS (Parcels) Ltd.; and BRS (Meat Haulage) Ltd. The shares of all these companies are owned by the British Transport Commission; those of BRS (Parcels) Ltd. and BRS (Meat Haulage) Ltd. are still subject to disposal at some later date. All the commission's vehicles are subject to the licensing system.

At the end of 1958, 1,290,000 goods vehicles were authorised under carriers' licences, consisting of 118,000 under 'A', or contract 'A', licences; 73,000 under 'B' licences; and 1,099,000 under 'C' licences. The number of road haulage vehicles licensed has more than doubled since 1938, and the net ton-mileage performed by road goods vehicles is now greater than that of the railways. Many of the big industrial centres and the major ports, particularly London, now rely to a great extent on motor goods transport. The number of 'C' licence vehicles has increased threefold since 1938. This class includes a large number of small vehicles used locally in the delivery of groceries and other goods. Other vehicles in this class are engaged in long-distance haulage of the traders' own goods, particularly food, special machinery and equipment, fragile goods, and milk, oil, chemicals and cement in special tanker lorries.

Public Passenger Transport by Road ¹

There are over ninety separate urban bus systems (excluding that of London¹) owned and operated by local authorities. The largest of these is in Glasgow, where 494 trams and 1,030 buses and trolleybuses carried some 570 million passengers in 1958. Birmingham city transport system carried 458 million passengers in 1958 and the Manchester system about 387 million.

The bus services throughout the country are operated by some 4,500 local concerns, nearly all of which belong to three main groups—British Electric Traction, the Tilling Group, and Scottish Omnibuses. Tilling's and Scottish Omnibuses are owned by the British Transport Commission; British Electric Traction is a private concern; the commission has substantial shareholdings in a

¹ Public passenger transport by road in London is described in the section on London Transport (see pp. 375-6).

number of companies in this group, but no controlling interest. There are also some 100 operators of express long-distance day and night coach services, many of which are also under the control of one of the three major groups. In 1958, 4,764 million passenger journeys were made on the buses and coaches operated by local authorities and 7,450 million passenger journeys on those belonging to other operators. London Transport Executive's operations are described on pp. 375-6.

Road Safety Measures

With nearly 8 million motor vehicles on its roads, Britain has the highest density of traffic in the world, giving rise to pressing problems of road safety. In 1958, 5,970 people were killed on the roads and 293,797 injured. This compares with 7,343 persons killed and 231,603 injured in 1934, when there were only 2½ million motor vehicles on the roads—an indication that the problem has, to some extent, been alleviated by road safety measures introduced under the Road Traffic Acts of 1934 and 1956. Among these are a speed limit of 30 miles an hour in built up areas, modified later by the introduction of a 40-mile-an-hour limit on certain main roads on the outskirts of London; the requirement, introduced in 1935, that all new drivers must pass a driving test (see below), the provision of pedestrian crossings, including some illuminated by flashing beacons and marked with conspicuous white stripes—hence the name 'zebra crossings', and the prohibition of overtaking and parking on sections of trunk roads marked in the centre by parallel continuous and intermittent white lines, when the continuous line is nearest to the driver. Special safety regulations are being applied to the new motorways.

All drivers of motor vehicles—including motor cycles, motor scooters and powered pedal cycles—have to pass a driving test before being granted a substantive licence to drive; until they pass the test they must obtain a 'provisional' licence which necessitates their displaying 'L' (Learner) plates and, in all cases where vehicles are constructed to carry passengers, other than pillion passengers, learner drivers must be accompanied by a qualified driver. Private motor cars, motor-cycles and light goods vehicles which are ten years old or more will come within the scheme for periodic vehicle tests under the Road Traffic Act, 1956.

In addition, vigorous road safety campaigns are conducted by local authorities with the aid of Government grants. The Royal Society for the Prevention of Accidents, which acts as the Government's agent in this connection, assists and co-ordinates these campaigns. The police and education authorities are actively at work in the cause of road safety. The standard of conduct for all road users—pedestrians and drivers—is set out in the *Highway Code*. A failure to observe the code does not of itself render a person liable to criminal proceedings but may be taken into account in any such proceedings.

Many cities in Britain are planning measures to alleviate traffic congestion. In London, and in some other local authority areas, parking meters have been introduced to regulate the length of time vehicles are parked; and increased off-street parking facilities are being provided. Several extensive schemes for the improvement of road safety and the relief of traffic congestion are being undertaken: these include 'fly-overs' at road junctions; new outlet roads from cities; and, as an experiment, the designation of certain stretches of four trunk roads as 'clearways', on which waiting on the carriageway is (with certain exceptions) prohibited.

INLAND WATERWAYS

In 1761, James Brindley completed the Bridgewater Canal to take coal from the collieries owned by the Duke of Bridgewater at Worsley to Manchester. This

marked the beginning of canal building in modern Britain which played an important part in promoting the industrial and commercial expansion of the late eighteenth and early nineteenth centuries. As railway competition developed, about one-third of the canal mileage passed to the control of the railways. During the first world war, Government control of railways included railway-owned canals and, under the Transport Act, 1947, most of the country's canals passed from Government control, which had been re-established in the second world war, to that of the British Transport Commission in January 1948.

The System

There are some 2,600 miles of navigable inland waterways in Great Britain, some 1,900 miles of which now belong to the British Transport Commission; the remainder is still in the hands of local authorities or private companies. About 1,000 miles of the commission's canals are narrow waterways which can generally be used only by boats not exceeding 7 feet in width, capable of carrying a load varying from 25 to 30 tons; the remainder are broad waterways and canalised rivers which can be used by craft of up to 400 tons capacity. The canals in Scotland are all broad waterways.

Of the 2,170 miles of inland waterways which originally came under the control of the British Transport Commission, 283 miles have been closed to navigation or abandoned, leaving 1,887 miles still open, of which 1,416 miles are in commercial use. Since 1955, the canals have been managed separately by the waterways division of the commission, known as British Waterways. For administrative purposes the canals in England and Wales are grouped into four divisions, based on the main navigable river estuaries, each group under a divisional manager. In Scotland, the Caledonian Canal and the Crinan Canal each have a separate manager, and the Forth and Clyde, Monkland and Union Canals are grouped together under another manager.

In 1958, total traffic on British Waterways amounted to 9.3 million tons, of which 4.1 million tons were coal, 2.1 million tons liquids in bulk and 3.1 million tons general cargo. Some three-quarters of the total traffic is carried on 325 miles of the broad waterways, which are mainly canalised rivers (see below).

Although British Waterways is the largest single operator, most of the traffic is handled by independent carriers, or by traders in their own craft. The British Transport Commission, at the end of 1958, owned 21 tugs and 1,137 carrying craft with a carrying capacity of 47,726 tons, including 200 power-driven craft with a carrying capacity of 9,657 tons.

Development

Since assuming control, the British Transport Commission has strengthened the commercial organisation; it has improved dredging methods and equipment, brought better types of craft into service, established a research organisation and undertaken various development works. Following the report, issued in 1955, by a specially appointed Board of Survey, a comprehensive five-year development plan was begun in 1956. Under this plan, nearly £6 million is being invested in the improvement of navigation and the provision of modern equipment on the seven major waterways that carry most of the traffic—the Aire and Calder Navigation, the Sheffield and South Yorkshire Navigation, the Trent Navigation, the river Lee, the river Severn, the river Weaver, and the Grand Union Canal (on the stretch below Berkhamsted). In addition, since 1955, British Waterways have spent approximately £750,000 in extending and improving warehousing and terminal facilities, on the building of new traffic craft and the modernisation of existing

vessels. Annual maintenance expenditure on the other canals of commercial importance has increased from £582,000 in 1954 to over £870,000 in 1958.

In July 1958, the report was published of the Committee of Inquiry into Inland Waterways appointed by the Ministry of Transport and Civil Aviation in 1956 to examine the future of the country's system of inland waterways and, in February 1959, the Government outlined its views on the main recommendations expressed in the report. It proposes to apply measures on an experimental basis for two years; it is hoped that the experience gained during this period will be of value in framing future legislation.

The development of those waterways designated by the committee as Class A (about 380 miles, which can earn a surplus from commercial operations) will continue to be the main point of effort, and the British Transport Commission has already spent about £2 million on their improvement. Class B waterways (about 930 miles, which operate at a loss but are still of commercial value) are not thought to justify the spending of substantial sums in improvements. For the third category, Class C waterways (considered by the committee to have no further value for commercial navigation), the Government has set up an Inland Waterways Redevelopment Advisory Committee to consider and assist in the promotion of redevelopment schemes. For Scotland, the committee recommended that the Caledonian and Crinan canals should be kept in being as navigation canals and that the Crinan canal should be improved; these proposals are still under consideration.

LONDON TRANSPORT

London is, with Tokyo and New York, one of the world's three largest cities. The area known as Greater London, within a radius of about 15 miles from Charing Cross, contains over 8 million people.

London's passenger transport system, in its modern sense, began in 1829 when the first omnibus, horse-drawn, appeared in the London streets. The first regular tram service, also horse-drawn, began in 1870. In 1863, the first underground steam railway, the Metropolitan, was built by digging a great trench for the line and roofing it over. In 1870, the world's first tube railway, the Tower Subway, was constructed under the river Thames; it was cable-operated and ran for only a few months. In 1890, the first electric tube railway in the world was opened, the City and South London line, and this was followed in 1900 by the Central London Railway, then followed the electrification of the steam-operated underground lines. Meanwhile, horse-drawn buses and trams were being replaced by motor buses and electric trams.

Until 1933, there were many separate undertakings providing passenger transport facilities in London, but in that year these were all vested in a single public corporation, the London Passenger Transport Board. In 1948, with the establishment of the British Transport Commission, the London Transport Executive took over control.

The London Transport Executive

The London Transport Executive, which consists of a chairman, vice-chairman, three full-time members and three part-time members, operates and manages, on behalf of the British Transport Commission, all bus, coach and underground railway services in the London area in conjunction with British Railways, which provide the main-line and suburban railway services. (Some 6,000 taxicabs that ply for hire in the streets are privately operated by companies or owner-drivers and are licensed annually by the metropolitan police.) London Transport's opera-

tions extend beyond Greater London to cover an area of 2,000 square miles (known as the London Passenger Transport Area) with a radius of about 25 miles from Charing Cross and with a population of some 10 million. In 1958, 3,176 million passenger journeys were made on the London Transport system.

London Transport's railway network stretches 18 miles from north to south, 32 miles from east to west, and 49 miles from north-west to east. The total length of the railway over which London Transport trains operate is 259 miles, of which 90 miles are underground, including the longest tube tunnel in the world, 17¼ miles long. London Transport trains serve 280 stations.

At the end of 1958, London Transport's diesel buses and coaches travelled over 2,819 miles of roads, and trolleybuses (which are operated by electricity) over 253 miles.

To carry traffic over all this area, the London Transport Executive in December 1958 owned 4,037 railway cars, 7,363 buses and coaches and 1,536 trolleybuses. The total staff employed at the end of 1958 was 81,252, of whom 10,978 were women.

Since 1945, all tramcars have been replaced by buses, and now most of the trolleybuses are being replaced, after 20 years continuous service, by diesel buses. The underground railways have been extended, and a new combined interchange station linking three lines at Notting Hill Gate was opened in March 1959. Since the beginning of 1958, the London Transport Executive has placed orders worth over £20 million for new rolling stock, to be completed by 1962 at the latest, and has undertaken £5 million worth of further track improvement schemes, which should also be completed by 1962. These are part of a general modernisation scheme for the Underground, on which over £30 million, including replacement of rolling stock, is expected to be spent in the four years to 1963. Proposals are under consideration for a new tube railway, estimated to cost £55 million, between Victoria Station and Walthamstow, in north-east London.

PUBLIC TRANSPORT IN NORTHERN IRELAND

With the exception of passenger transport in Belfast, which is provided by the city corporation, public road passenger and freight transport and rail services within Northern Ireland are provided by the Ulster Transport Authority, a public body which was established under the Transport Act (Northern Ireland), 1948.

The road passenger section of the authority's undertaking operates a wide network of omnibus services and an extensive programme of coach tours. The road freight section provides a comprehensive service for the carriage of merchandise of all descriptions (including heavy indivisible loads and livestock) and can supply vehicles under contract for the exclusive use of traders. A chain of hotels is also owned by the authority.

Since October 1958, when the authority took over the Northern Ireland section of the Great Northern Railway, the authority has operated 336 route miles of railway.

The following figures relate to the authority's undertaking during the year ended 30th September, 1958; they do not cover the additional 169 route miles of the Great Northern Railway system nor the traffic on that system.

Permanent way (open for operation)		167 miles
Locomotives		45
Diesel rail cars and trailers		73
Railway coaching vehicles		252

Railway freight vehicles	2,315
Road route mileage (omnibus)	2,660 miles
Omnibuses and coaches	982
Goods motor vehicles and trailers	1,440
Passengers carried during year (rail and road) ..	91,492,030
Merchandise carried during year (rail and road) ..	1,529,019 tons
Livestock carried during year (rail and road) ..	932,824 head

Roads

There are 13,735 miles of public roads in Northern Ireland, comprising 347 miles of trunk roads, 961 miles of Class I roads, 1,757 miles of Class II roads, 2,867 miles of Class III roads and 7,803 miles of unclassified roads. The Ministry of Commerce is responsible for the maintenance and improvement of the trunk roads and makes grants from the Road Fund (which is derived from such sources as the proceeds of taxation of mechanically propelled vehicles registered in Northern Ireland and from driving licence fees) to help the local authorities who are responsible for the other roads. During the year ended 31st March, 1958, a total of £5½ million was spent on work on all types of roads in Northern Ireland.

CIVIL AVIATION

United Kingdom civil air services are provided by the two public corporations British Overseas Airways Corporation (BOAC) and British European Airways (BEA) and by some twenty independent air transport companies. Most of the regular scheduled air services operated from the United Kingdom are reserved to BOAC and BEA. The independent companies are permitted to operate certain scheduled services as associates of the two corporations, but by far the greater part of their operations consists of charter work, including the carrying of troops. The corporations may also undertake charter work, though they do not maintain aircraft specially for this purpose.

The development of United Kingdom civil air services since 1947 is shown in Table 25.

Growth of Air Services

British airmen were among the first to carry mails (at the time of the Coronation of H.M. King George V in 1911) and among the first to operate regular mail and passenger services. The actual inauguration of British civil air transport came on 25th August, 1919, when a daily passenger service was opened between London (Hounslow) and Paris (Le Bourget). The year 1919 was also marked by notable pioneer flights including the crossing of the Atlantic by John Alcock and Arthur Whitten Brown in June (both were later knighted for their achievement) and the first flight between England and Australia by Captain (later Sir) Ross Smith and his crew.

In April 1924, four small British companies merged to form Imperial Airways Limited, which received a Government grant of £1 million spread over the next ten years. As a substantial shareholder the Government was represented on the board of directors.

Imperial Airways Limited pioneered the commercial development of inter-continental air routes (including the organisation of ground services), following up, in many cases, the exploratory work of the Royal Air Force. By 1929, there was a through service from England to India. In 1931, the first service was established

to Central Africa. The first mail service to Australia started in December 1934, followed by a passenger service in 1935. During a part of 1939, Imperial Airways operated an experimental transatlantic service for mail.

The British Overseas Airways Corporation was established by the British Overseas Airways Act, 1939, and took over the undertakings of Imperial Airways Limited and British Airways Limited in 1940. During the second world war, BOAC operated essential overseas air services in support of the war effort. By the end of the war, it was carrying more than twice as many passengers as in 1939 and more than three times as much freight. The routes, moreover, had efficient radio and radar systems which had been installed for war purposes and which were adapted for civilian use.

TABLE 25
UNITED KINGDOM AIRWAYS OPERATIONS ON SCHEDULED SERVICES

<i>Domestic Services</i>				
Calendar Years	BEA		Independent Companies	
	Passengers Carried '000	Total Load Short Ton-Miles '000	Passengers Carried '000	Total Load Short Ton-Miles '000
1947 (a)	342	4,252	—	—
1949 (a)	453	6,971	61	481
1952	669	11,087	70	907
1955	1,212	21,694	220	3,186
1958	1,164	24,338	304	4,592
<i>International Services</i>				
Calendar Years	BEA & BOAC		Independent Companies	
	Passengers Carried '000	Total Load Short Ton-Miles '000	Passengers Carried '000	Total Load Short Ton-Miles '000
1947 (a)	244	61,879	—	—
1949 (a)	468	87,734	11	293
1952	1,064	164,203	52	2,370
1955	1,782	222,924	275	17,030
1958	2,061	278,097	455	22,540

Source: Ministry of Transport and Civil Aviation.

(a) Figures for international services in these years include the operations of British South American Airways, which was merged with BOAC in 1949.

After the war, British European Airways was established, under the Civil Aviation Act of 1946, as a separate public corporation to cover the United Kingdom and Europe.

The one serious obstacle to a continued expansion of British civil air transport after the war was the absence of any new British civil aircraft to take the place of the pre-war types. The British aircraft industry throughout the war had concentrated entirely on the production of fighters and bombers for the Allied Forces, leaving the production of all transport aircraft to the United States. Although this was a period of rapid expansion for the two corporations, it was not until the entry into service of the first gas turbine powered aircraft, and particularly the turbo-prop *Viscount*, that civil aviation in the United Kingdom was able to make the fullest use of its potentialities. The turbo-prop *Britannia* and the return to regular service of the turbo-jet *Comet* have further enhanced the reputation of the United Kingdom aircraft industry (see pp. 336-7) and British airlines.

The Role of the Government

Responsibility for the general development and supervision of United Kingdom civil aviation rests with the Minister of Transport and Civil Aviation. The Civil Aviation Act of 1949, gives the minister the duty of 'organising, carrying out and encouraging measures for the development of civil aviation, for the designing, development and production of civil aircraft, for the promotion of safety and efficiency in the use thereof, and for research into questions relating to air navigation'. The supervision of design, development and production of civil aircraft has been delegated to the Ministry of Supply, which is also responsible for the provision of all Service aircraft and carries on an extensive programme of research and development to meet civil and Service needs.

In the international sphere, the Minister of Transport and Civil Aviation is responsible for participation in the work of the International Civil Aviation Organisation (ICAO) of the United Nations Organisation and, with the Foreign Office and the Commonwealth Relations Office, for dealings with other countries relating to civil aviation. He also advises the Colonial Office on civil aviation matters.

The Government's relations with the air corporations and with the independent operators are described on pp. 380-81. Three special bodies advise the minister in the exercise of certain of his responsibilities: the Air Transport Advisory Council, the Air Registration Board and the Air Safety Board.

The Air Transport Advisory Council (ATAC). The ATAC was established by the Civil Aviation Act of 1946, and its main function is to consider applications from independent companies to operate scheduled services and to make recommendations on them to the minister.

The Air Registration Board. The board was set up in 1937, and consists of 18 members, of whom 16 represent the interests concerned with civil aviation and two are appointed by the minister. It is an independent, non-profit-making limited company to which the minister has delegated certain functions relating to the design, construction and maintenance of civil aircraft. The work of the board includes the investigation, by its surveyors, of aircraft and associated equipment for the purpose of making recommendations to the minister concerning the issue and renewal of certificates of airworthiness. It also undertakes the technical examination of aircraft maintenance engineers, flight engineers and commercial pilots in relation to the issue of appropriate licences.

The Air Safety Board. The board is a standing advisory body of experts responsible to the minister for keeping under continuous review the needs of safety in

British civil aviation. It recommends measures to increase safety and efficiency in the operation of British civil aircraft throughout the world and in the system of ground facilities provided for all civil aircraft operating over the United Kingdom. In exercising his responsibility for safety, the minister, advised by the board, regulates the operation of aircraft, the conditions under which passengers and cargo may be carried, the licensing of flight crews, the effectiveness of air traffic control and of navigational aids (see below and p. 385).

The Corporations: Powers and Constitutions

The existing powers and constitutions of BOAC and BEA are laid down by the Air Corporations Acts, 1949 to 1956. Each corporation consists of a chairman, deputy-chairman and from 5 to 11 members, all of whom are appointed by the minister. In the case of BOAC, the minister may, if he wishes, appoint two deputy-chairmen.

The annual reports and statements of accounts of the two corporations are laid before Parliament by the minister. In addition, each corporation must submit, before the beginning of every planning period (of three years), a programme of the services it proposes to provide and of any other activities it intends to undertake, as well as an estimate of its receipts and expenditure on revenue and capital account during the period.

Finance. Each corporation may, with Treasury consent, borrow either by raising temporary loans or by issuing stock carrying a Treasury guarantee. In addition, the Finance Act, 1956, permitted the corporations to raise money by means of interest-bearing redeemable loans from the Exchequer, and these powers have been renewed each year under the annual Finance Act. Under the Air Corporations Act, 1956, the borrowing powers of BOAC and BEA are limited to £160 million and £60 million respectively. This Act also provides that BOAC may, with the consent of the Treasury, borrow from the International Bank and the Export-Import Bank of Washington in order to buy aircraft and spares manufactured in the United States of America.

Ministerial Control. Although the minister is empowered to give general directions on matters affecting the national interest, for example, the placing of orders for aircraft, these powers are very seldom used. The corporations function as commercial undertakings, and contact with the ministry is by means of frequent but informal exchanges of views. The minister also keeps in touch with the corporations regarding plans for new aircraft and new routes, since he has to negotiate the necessary rights with foreign governments. He also provides most of the aerodromes in the United Kingdom from which the corporations operate, and the necessary navigational aids and communications.

Labour Relations. In 1946, the *National Joint Council for Civil Air Transport* was set up as the body through which terms and conditions of service between the corporations and the various trade unions, representing the employees, are negotiated, and matters affecting safety, health, welfare and efficiency are discussed.

Independent Airline Companies: Government Policy

The policy of the Government is to achieve a fair and reasonable balance between the airways corporations and the independent operators. Charter work has been the main province of the independent companies, but, since 1948, they have been permitted to operate scheduled services under associate agreements with the corporations. In 1952, the independent companies became eligible, as are the corporations, to apply for permission to develop new routes and new types of

scheduled services. The ATAC advises the minister on applications designed to develop new services without materially diverting traffic from the existing services. The ATAC's terms of reference reserve to the corporations the right to provide both first and second (or tourist) class services on their existing international networks.

The ATAC publishes applications and, after hearing evidence from interested parties, makes recommendations to the minister. Approval of the regular scheduled services (but not the seasonal scheduled services) of independent companies, operating as associates of the corporations, is now normally given for seven years, with extension to ten years in special circumstances, for example, where the purchase of new aircraft is involved. In this way, it is intended to give independent companies sufficient long-term security to justify capital outlay and expansion.

Operations

The services, fleets and results of the two corporations and the activities of the independent companies at mid-June 1959 are summarised below.

British Overseas Airways Corporation

BOAC operates scheduled services to the Middle and Far East and to Australia, with terminals at Sydney, Tokyo, Hong Kong, Singapore, Karachi, Bahrain, Kuwait, Doha, Tehran, and Aden; to Africa, with terminals at Johannesburg, Nairobi, Accra and Lagos; to North America and the Caribbean with terminals at New York, Chicago, San Francisco, Montreal, and Jamaica; and to Caracas in South America. There are regional services between New York and Bermuda, Nassau and Jamaica; these services operate as extensions of the London-New York route. In January 1960, a route down the east coast of South America is to be opened. The routes to Central and South Africa are operated in pool-partnership with Central African Airways and South African Airways. Services to West Africa and East Africa are similarly operated in pool-partnership with Ghana Airways, Nigerian Airways, and the East African Airways Corporation. Services to Sydney via the Middle and Far East continue to be operated in pool-partnership with Qantas Empire Airways of Australia. In August 1959, BOAC inaugurated its first commercial round-the-world air service using turbine-powered aircraft, linking, among other places, New York, Tokyo, Hong Kong, Rome and London.

This network of services is supplemented by the activities of subsidiary and associated enterprises overseas in which BOAC participates financially or with which it has technical or management agreements.

BOAC has a controlling financial interest in airlines operating in the southern Red Sea area, the Caribbean and the Persian Gulf. It is associated, either financially or through advisory and other agreements, with airlines providing services in East, West and Central Africa, Malaya, the Far East, Borneo, Turkey, the Middle East, and the Bahamas.

BOAC has introduced tourist services on many routes and, on transatlantic services, an 'economy' class service with fares 20 per cent below the existing tourist rates. In 1958-59, tourist and economy class passengers accounted for 69 per cent of those who travelled by BOAC's transatlantic services; on its other services, tourist class passengers made up 62 per cent of the total.

BOAC's operational fleet in June 1959 consisted of: 13 Mark 4 *Comets*; 15 medium-range Mark 102 *Britannias*; 17 long-range Mark 312 *Britannias*; 3 *Argonauts* and 10 *DC 7Cs*. Orders for the following British aircraft were outstanding: 6 Mark 4 *Comets* and 35 Vickers *VC 10s*. In addition, orders had been placed in the United States of America for 15 Boeing 707 jet aircraft.

The *Britannia 102* was introduced on BOAC's eastern hemisphere services during 1957. On 19th December, 1957, a *Britannia 312* of BOAC's fleet inaugurated the world's first gas turbine scheduled passenger transatlantic service, from London to New York. The Mark 4 *Comet* turbo-jet airliners came into service on BOAC's North Atlantic route in the autumn of 1958 and on the eastern hemisphere services at the beginning of 1959.

On all its services in the calendar year 1958, BOAC carried 465,263 passengers, 8,548 short tons of freight and 4,065 short tons of mail, compared with 117,627 passengers, 3,475 short tons of freight and 1,974 short tons of mail in 1948.

In 1951-52, BOAC for the first time made a net profit of £275,000, after payment of interest on capital and before crediting the Exchequer grant in that year of £1.5 million. Since 1952-53, BOAC has operated without Exchequer grant. From 1953-54 to 1956-57, the annual profit varied from £1 million to £117,000. In 1957-58, a loss of £2.8 million was incurred, and this increased to £4.75 million in 1958-59. Adverse factors which gave rise to the setback included greatly increased capital charges, losses suffered by associated airlines, a strike at London Airport in the autumn of 1958, the cost of the change-over in fleets, and difficult trading conditions generally.

From 1947-48 to 1958-59, the capacity on BOAC services increased from 89.5 million to 364 million capacity ton-miles, operating revenue increased from £14.6 million to £57.6 million, and operating costs were reduced from 57.7 pence per capacity ton-mile to 36.3 pence.

British European Airways

BEA is the seventh largest airline in the world and the largest in Europe, judged by the annual number of passengers carried—2,760,000 in the calendar year 1958. In that year it operated on its own behalf, in conjunction with its associated companies and subsidiaries, a network of services covering 39,916 unduplicated route miles, serving 82 airports in the United Kingdom, Europe, North Africa, and the Persian Gulf, within a periphery on which the farthest points to the north, south, west and east are Bergen, Doha, Lisbon and Moscow. Its services within the United Kingdom include a number which cannot be operated commercially but which meet a vital social need; these include services to the Highlands and Islands of Scotland. Tourist fares have been introduced on all BEA's routes. BEA maintains a close working relationship with BOAC, whose aircraft, by agreement, use a number of European stopping points. BEA also co-operates with other airlines in order to create 'through travel' facilities.

BEA's operational fleet in June 1959 comprised 24 *Viscount 701s*, 21 *Viscount 802s*, 19 *Viscount 806s*, 34 *Pionairs*, 7 *Pionair Leopard* freighters, 2 *Heron*s, 3 *Rapides* and 5 helicopters. At that date 20 *Vanguards*, 6 Mark 4B *Comets* and 24 *DH 121s* were on order.

The *Viscount V 701* 'Discovery' class was brought into regular scheduled service in April 1953, on the routes to Istanbul and Cyprus, thus inaugurating the world's first commercial operations with propeller-turbine aircraft. A larger version, the *Viscount 802*, was brought into service in February 1957 between London and Paris. Since September 1958, practically all BEA's international services have been operated by *Viscounts*. On the Moscow route, which opened in May 1959, the *Viscount 806* is used. In 1960, BEA will be taking delivery of the larger and more powerful turbo-propeller *Vanguard*. In the same year, it will also inaugurate its first turbo-jet service with the 500 m.p.h. *Comet 4B*; this will pave the way for the 600 m.p.h. *DH 121* jet airliners which have been ordered by BEA for delivery between 1963 and 1966.

From 1950 to 1956, BEA operated various experimental scheduled services with helicopters in order to obtain experience in their civil operation. This experience can be used to assist the design and production of a commercial British helicopter that can be operated economically, and also the development of navigational aids and ground facilities. Two British helicopters are being developed—the Westland *Westminster* and the Fairey *Rotodyne*—which may prove suitable for airline service within the next few years.

In addition to 2,760,000 passengers, BEA carried 30,450 short tons of freight and 7,600 short tons of mail in the year 1958. The figures in 1948 were 511,522 passengers, 2,610 short tons of freight and 1,558 short tons of mail.

Over the period 1947–48 to 1958–59, BEA's capacity increased from 22 million to 180 million capacity ton-miles, operating revenue from £4 million to £32 million, and total costs were reduced from 83.6 pence per capacity ton-mile to 40.2 pence. BEA is faced with the problem of securing adequate revenue from short-haul routes aggravated by a marked seasonal variation in its traffic.

In 1954–55, BEA achieved its first net profit of £63,000. In 1955–56, it earned a net profit of £603,614 which was sufficient to wipe out its accumulated deficit and leave a surplus of £64,528. In 1958–59, despite losses caused by the exceptionally bad flying weather of the winter, BEA made a profit of £233,000.

Independent Airline Companies

Because the air corporations were already operating services on all the major international routes in 1952, most of the opportunities for the independent companies to undertake scheduled services have been in the operation of secondary routes and the provision of special types of services. The secondary routes on which the independent companies provide passenger services consist mainly of domestic routes and routes from United Kingdom provincial centres to Europe and the Channel Islands. They also operate third-class services (known as colonial coach class services) to points in the Colonies, and tourist class services to Ghana and Tunis. The coach class services are provided along routes already covered by the scheduled services of BOAC, but the independent companies operate with fewer passenger amenities and older types of aircraft. Other special services are vehicle ferry services from the United Kingdom to Europe, inclusive holiday tour services to Europe and to Africa, and all-freight services, also to Europe and Africa. Some of the larger companies operate subsidiaries in overseas countries and, in some cases, also provide management services for foreign airlines.

Passenger traffic on the independent companies' scheduled services has risen from 122,000 in 1952 to 938,000 in 1958. The number of cars carried on the vehicle ferry services has risen from 6,797 in 1952 to 63,591 in 1958.

Charter Services. The greater part of the independent companies' operations still consist of general charter work, notably air trooping which accounts for more than half the total passenger miles flown by independent airlines on all operations, both scheduled and charter. Other charter work includes the carrying of ships' crews to and from overseas ports; transporting the staff of public or private concerns operating overseas; taking parties to football matches and race meetings in the British Isles; carrying livestock, machinery, foodstuffs, flowers and other valuable, fragile or perishable cargo. There are also several firms that specialise in other aerial activities, notably aerial survey and pest control. Most of the companies are members of the British Independent Air Transport Association.

Much charter business is now arranged through the air section of the *Baltic Exchange*, the London market for shipping space (see p. 358), where business from any part of the world is handled between brokers representing the owners of

aircraft available for hire and the prospective shippers of cargo or organisers of passenger trips. Inquiries for the charter of aircraft were first received on the Baltic Exchange as long ago as 1925, but it was not until 1947 that an air section was formed. The *Airbrokers Association*, formed in February 1949, operates, in London, a world market for chartering aircraft to carry cargo and passengers.

Aerodromes

The Minister of Transport and Civil Aviation is authorised to establish and maintain civil aerodromes, and so may local authorities, subject to his approval; there are also privately owned aerodromes. All aerodromes, not operated by the Government, used for commercial operations are subject to the minister's licensing, inspection and regulation.

There are approximately 110 civil aerodromes in the United Kingdom and, in addition, about 56 Service aerodromes are available for civil use. Those under civil control include 26 directly controlled by the ministry, 3 in the Channel Islands and 1 in the Isle of Man (administered by the local island governments) and 25 aerodromes licensed for public use, of which 16 are owned by municipalities. Customs facilities are provided at 14 of the ministry's aerodromes and at 9 others.

The main airports used by international scheduled services in 1958-59 were:

for European services: London, Manchester (Ringway), Renfrew, and Birmingham (Elmdon);

for North Atlantic services: London, Manchester (Ringway), and Prestwick;

for Middle East, African and Far East services: London.

Aircraft and passenger movements at the principal aerodromes continue to increase. In 1958, all United Kingdom civil aerodromes handled 7.1 million passengers. Of this total, London Airport dealt with 3.56 million, and Gatwick, 186,000. Outside the London area, Manchester (Ringway) handled the largest number, 505,000; followed by Glasgow (Renfrew), 443,500; Belfast (Nutt's Corner), 270,000; Ferryfield (Kent), 223,000; Prestwick, 218,500; and Isle of Man (Ronaldsway), 196,000. The number of movements of aircraft engaged on commercial transport operations in 1958 was 339,853 for all United Kingdom aerodromes.

Development

London Airport, already the largest and busiest airport in Western Europe, will be strained to capacity within the next few years owing both to the increasing number of passengers and to the increased size of the new jet aircraft that many international airlines are bringing into service. The recommendations of a special committee, set up in 1957, to consider the future of London Airport have been accepted by the Government as the framework of the airport's development. Most of the European short-haul services are now handled at the new passenger buildings in the central terminal area opened in April 1955. Another passenger building, for the long-haul operators, at present handled at the north terminal, is to be built in the central terminal, to be followed by other buildings; additional aircraft stands are also being constructed. The new airport at Gatwick, 25 miles south of London, which was opened by H.M. the Queen in June 1958, has been developed as the second airport for London. Initially it is being used as the main bad weather alternate to London Airport, and for services to the Channel Islands by BEA and some of the independent operators; eventually many more European services are expected to operate from this airport. Built alongside the main London to Brighton railway, it is the first airport in the world to contain road, rail and air transport in one unit. A privately owned helicopter terminal (or 'heliport') was opened in London, on the south bank of the Thames, in April 1959.

Prestwick (near Ayr, in Scotland), the second international airport in the United Kingdom, is to be developed so that it can accommodate the new large jet aircraft. The runways at Ringway Airport, near Manchester, have been lengthened and a new terminal building is being built.

Air Traffic Control and Navigation Services

The Ministry of Transport and Civil Aviation is responsible for providing efficient navigation and traffic control services for all civil aircraft flying over or near the United Kingdom. Meteorological information is provided by the Air Ministry. The Ministry of Transport and Civil Aviation's Air Traffic Control Service is responsible for the safe, orderly and expeditious movement of all civil airliners flying into the United Kingdom along the corridors of controlled airspace called airways.

In July 1959, the Government announced its intention to set up an Air Traffic Control Board to formulate policy covering both civil and military aircraft and to co-ordinate the work of all United Kingdom authorities concerned with air traffic control. The board, to consist of senior representatives of the ministries concerned under an independent chairman, will be assisted by an air traffic control executive and will be responsible jointly to the Minister of Transport and Civil Aviation and the Secretary of State for Air.

The Ministry of Transport and Civil Aviation introduced a system of airways covering the main traffic routes and associated with controlled zones around the major airports in 1950. During 1957 and 1958 a revised and extended airways system was brought into use. There are three main air traffic control centres, operated jointly by the ministry's Air Traffic Control Service and by the Royal Air Force, at London Airport for southern England, at Preston for the north of England and Wales, and at Prestwick for Scotland and the Atlantic. The Southern Air Traffic Control Centre, situated on the boundary of London Airport, is one of the most advanced control centres in the world.

In order to provide the means by which the air traffic control system can accept the increasingly heavy load of air traffic, the ministry has provided a variety of radar installations and equipment. The United Kingdom was the first country to use radar for the control of civil air traffic. The radar approach system known as Ground Controlled Approach (GCA) is now in use at all major airports in the United Kingdom, in addition to the Instrument Landing System (ILS). A series of long-range radar stations that is being set up will extend radar coverage very widely.

The ministry has provided a number of radio navigational aids, many of them operating on very high frequency (VHF), to help aircraft to remain safely within the controlled airspace and to make accurate estimates of their time of arrival. In addition, the ministry supports the Decca Air and Marine Navigator System now operating over a wide area of the United Kingdom and northern Europe which can be used, by arrangement with the Decca Company, by any aircraft fitted with the appropriate receiving equipment. Research is in progress into new landing aids for use in bad weather. A unit of the Royal Aircraft Establishment, at Bedford, is developing an automatic landing system which is expected to be in use within the next few years. Consideration is also being given to the employment of the fog dispersal apparatus (FIDO) at London Airport to enable aircraft to land and take off in dense fog.

Radio stations maintained by the ministry provide air to ground communications for the use of the Air Traffic Control Service. There is also a network of communications between ground stations in the United Kingdom and between United Kingdom and overseas ground stations.

On routes outside the United Kingdom, British airline operators rely upon ground organisation provided by the countries over which they fly. In January 1947, the airways corporations took the initiative in forming a company, registered in the United Kingdom, called *International Aeradio Limited* (IAL), for the purpose of helping countries in need of assistance by providing radio communications, air traffic control and navigational facilities for civil aviation. Airlines of other countries have accepted invitations to become shareholders, and the membership is broadly representative of international civil aviation. IAL operates by entering into contracts with Governments to provide whatever degree of assistance is required to enable States or Administrations to fulfil their international obligations under the Chicago Convention on Civil Aviation for the provision and maintenance of ground facilities for civil aviation. In 1959, International Aeradio Ltd. was operating, either directly or through subsidiary or associated companies, in 26 countries. It has over 40 overseas stations all over the world as well as at Yeadon (Yorkshire), Cranfield (Bedfordshire) and London in the United Kingdom. In all overseas areas, IAL trains locally engaged staff up to the standards required for the services it provides; this policy has been so successful that more than 85 per cent of overseas staff are locally recruited. At Southall, Middlesex, IAL has established a School of Air Traffic Control to train its own air traffic control officers as well as those from other interested organisations.

THE POST OFFICE

The Post Office with its staff of some 371,000 is a Government department. It is also the oldest of Britain's State undertakings. In 1657, under the Protectorate of Cromwell, an Act of Parliament was passed which declared that 'there shall be one general post-office and one officer, styled the Postmaster General of England and Comptroller of the Post Office'.¹

The ministerial head of the Post Office is the Postmaster General who, with the Assistant Postmaster General, is responsible to Parliament for his department. Under the Postmaster General, the permanent head of the Post Office is the Director General, who is supported by three Deputy Directors General, one of whom is the Comptroller and Accountant General, and an Engineer-in-Chief. At the next level there are eight departmental directors and a Public Relations Officer. The Post Office headquarters is in St. Martin's-le-Grand in the City of London.

Six of the main divisions of work at headquarters are carried down into the organisation of three directorates—Scotland, Wales and Border Counties, and Northern Ireland—each under the control of a director of the Post Office, and, in England, seven regions, each under the control of a regional director; London has two regional directors, one for postal services and one for telecommunications. In the United Kingdom there are 472 head post offices, nearly 24,500 subordinate post offices, and 56 telephone areas.

The staff at headquarters and in the directorates and regions is divided into two main groups: general Civil Service grades (administrative, executive and clerical) and special grades recruited directly by the Post Office for its engineering and operational activities.

The Postmaster General normally presides over meetings of the Post Office

¹ Charles II declared all Cromwellian Acts null and void at the Restoration, but his Parliament passed a similar Act in 1660.

Advisory Council, on which the principal users of the Post Office services are represented. In addition, there are about 190 local Post Office Advisory Committees, on which are represented local authorities, chambers of commerce, women's organisations, the press and other local interests; these committees are formed on the initiative of, and are maintained by, the local interests, and are not organs of the Post Office.

The work of the Post Office falls into two main categories: (1) direct services—mail services, telecommunications, remittance and savings bank business; (2) agency services—broadcasting services and business undertaken on behalf of other Government departments.

Although a Government department, the Post Office is also a trading concern, and is required to ensure that its income is sufficient to meet its expenditure, taking one year with another. Except for the periods 1933–40 and from 1956 onwards, any surplus of income over expenditure was handed over to the Exchequer. Since 1956, the Post Office has been required to contribute £5 million a year to the Exchequer—this being broadly the amount which it would pay in general taxation but for its exemption. Any remaining surplus or deficit is carried to a general reserve account.

Mail Services

The development of postal communications in Britain can be traced from the time when horsemen carried dispatches to the Tudor Court up to modern airmail transport. There was a great expansion in the postal services in the eighteenth century with the introduction of mail-coaches in 1784. In the first half of the nineteenth century, the Post Office was quick to take advantage of Britain's early lead in engineering and railway development, and the first dispatch of mails by train was made in 1830 between Liverpool and Manchester.

The heavy charges, based upon the actual distance a letter was carried, were among the factors which inspired Rowland Hill in his great work of postal reform that led to the establishment of a uniform postage rate. In 1840, a uniform inland rate of postage of one penny per half-ounce payable in advance came into operation, prepayment to be made by means of adhesive postage stamps. Since the business world found cheap postage a boon and since it proved ultimately a great financial success, it was imitated by almost every country in the world.

The inauguration of the penny post (the rate remained unchanged until 1918)¹ was followed by a rapid extension of the scope of the postal services, beginning in 1841 with the introduction of the registered post to ensure additional safety for valuable mail. The money order system, which had operated as a private venture from 1792 to 1838, was supplemented in 1881 by the issue of postal orders for fixed amounts. Letterboxes had been instituted in London in 1855 to facilitate the increased postal traffic, and in 1883 the parcel post was introduced. By the end of the nineteenth century a regular delivery of letters was assured to every house in Britain. In the twenty years from 1938–39 to 1957–58, the parcel post increased from 185 million items a year to 247 million, registered postal traffic from 62 million to 102 million and other postal correspondence from 8,240 million to 9,600 million. Every day the Post Office handles about 27 million letters and parcels. Each year the Post Office deals with an ever-increasing volume of Christmas mail; during the Christmas–New Year season, 1958–59, more than 864 million letters and cards were posted.

The Post Office's services have been developed to match the needs of the traffic.

¹ The minimum postage rate for inland letters is now 3d. for one ounce.

Improvements include the provision of motor mail vans¹ and electrical trucks for parcel deliveries, controlled by walking postmen, postal-sorting carriages on the railways, special mail trains on certain routes and the ingenious apparatus by which bags of mail are delivered and collected by trains running at express speed. For quick transmission of mails within the central area of London, the Post Office has for 30 years operated an automatically controlled underground railway that runs for 6½ miles connecting Paddington in the west with Whitechapel in the east and serving six intermediate stations; a seventh station is under construction.

The Post Office Research Station at Dollis Hill, London, has developed a partly electronic letter-sorting machine (ELSIE). Twenty prototype machines are being tested at busy centres, and at Norwich all the sorting of small letters is being mechanised. Following a survey conducted to find out if members of the public would be prepared to use postal codes in addresses on mail, to facilitate sorting by electronic machines, an experimental scheme, described as being in advance of anything of its kind in the world, was launched in Norwich in July 1959. A parcel-sorting machine has been developed, and new parcel offices being erected in London, Leeds and Manchester are designed to accommodate units. Field experiments are being carried out with machines for separating letters and packets, and for automatic 'letter-facing' (ALF), i.e. stacking letters with all the stamps in the same corner. Experiments are being undertaken with machines for selling postal orders. The main post offices are being equipped with machines for issuing parcel post labels printed with the appropriate value, and the date and name of the office, thus avoiding the use of stamps and eliminating the operation of cancelling the stamps.

Airmail Services

Railways and motor vans as means of transport for mails are supplemented by ships and aeroplanes. Each year about 3,000 tons of mail are carried by air within the United Kingdom. Special night air services for mails are run between Great Britain, Northern Ireland and the Irish Republic. In the year ended March 1958, total overseas correspondence amounted to 503 million items, 51 per cent of which travelled by air. First-class mail to all European countries is sent by air or by surface transport, whichever offers earlier delivery, without payment of any air surcharge. The Post Office dispatches about 32 tons of letter mail a week to European destinations by this 'all-up' service, mainly in aircraft of British European Airways, whose network of services enables many of the letters posted in London for Europe to be delivered the following day. The air parcel service now operates to all countries in Europe except Roumania, and about 10 tons of parcel mail are dispatched weekly to Europe by air.

First-class mail and second-class mail are dispatched by air to countries outside Europe upon payment of special airmail rates of postage. Light-weight air letters costing 6d. each are popular, and air parcel services are also available to 158 countries outside Europe.

Telegraphs

All private telegraph systems in Britain were transferred to the control of the Postmaster General in 1870. Teleprinter-working for the transmission of inland telegrams was introduced generally in 1928 and conversion to the present automatic switching system was completed in mid-1954. It is now one of the most up-to-date

¹ In 1919, the Post Office inaugurated its own motor transport fleet with 48 vehicles; this fleet now numbers over 37,500, of which about 14,500 are red mail vans, and 19,000 are green engineering vans.

systems in the world and gives direct connection between any of the 500 larger telegraph offices. The Post Office accepted 15 million inland telegrams in 1957-58, and the average time between handing in an inland telegram and its receipt at the delivery office was 20 minutes.

Telex

The Telex Service provides communication between subscribers with the speed of the telephone and the authority of the printed word. The printed copy of the message is produced on the teleprinters at both the sending and receiving subscribers' installations. Calls may be made between telex subscribers in the United Kingdom (over 5,250 by mid-1959) and between them and some 100,000 subscribers in many countries overseas. The service is available day and night except on a few routes outside Europe; messages may be transmitted to a subscriber even though his teleprinter is unattended, and thus are available for attention when his office reopens. Use of the telex service is expanding rapidly; in 1957-58, total traffic increased by 27 per cent over the previous year.

The United Kingdom is divided into 50 charging areas, each with its telex centre. Calls are connected at telex exchanges, most of which are staffed at present by telegraphists; but in 1958 the first automatic telex exchanges were opened, and a completely automatic service will be achieved by the end of 1960, when subscribers will be able to dial all calls within the United Kingdom. Charges for calls connected by operators are based on the distance (measured in a straight line) between the telex centres; the minimum chargeable period is three minutes. Charges for calls dialled direct by subscribers are based on time and distance and there is no three minute minimum.

Inland and overseas telegrams may be sent to the Post Office by telex; no charge is made for the calls, and the telegrams are charged for at normal rates. Arrangements can also be made for incoming telegrams to be received by telex.

Telephones

When the Post Office bought the property of the National Telephone Company in 1912, it became the owner of almost the whole telephone service in the country. Local authorities wishing to operate their own telephone services were permitted to do so under licence from the Postmaster General, but the only municipal system now in existence is that provided by the Corporation of Hull. Local telephone service in the Channel Islands is provided, also under licence, by their Governments' telephone departments. The Hull and Channel Islands local systems, although operated independently of the Post Office system, are connected to the Post Office trunk network.

At the end of March 1958, there were 6,000 telephone exchanges in the United Kingdom. There were some 7.36 million telephones, including 72,000 telephone call offices for public use. Four-fifths of the telephones are connected to automatic exchanges. The number of applicants waiting for telephones has been reduced from 233,000 to 60,000 within the last three years. In January 1958, a scheme of simplified charges was introduced as a first step towards the goal of a fully automatic telephone service. A system of national telephone numbers is planned, which will make it possible to dial trunk calls. Trunk dialling by subscribers began in Bristol in December 1958; by the end of 1960, about forty other towns will have similar equipment and, by 1970, it is hoped that three-quarters of all trunk calls will be dialled by subscribers. The introduction of this new group routing and charging equipment (GRACE) will bring the advantages of quicker service, automatic accounting and cheap long distance calls of short duration, and will constitute the

most radical reform of the telephone service since the Post Office assumed national responsibility for it.

The number of trunk calls made has trebled since 1939; in the year ended 31st March, 1958, the Post Office handled a total of 327 million, of which about a quarter were at the cheap night rate, available from 6 p.m. to 6 a.m., and on Sundays from 2 p.m. The number of local calls handled during the year ended 31st March, 1958, was 3,671 million, an increase of 73 per cent compared with 1938-39.

There are several specialised services available by telephone. Well over 90 per cent of subscribers connected to automatic exchanges can use the '999' emergency dialling service, which enables them to be connected as quickly as possible to the police, ambulance or fire brigade, and in certain coastal districts to lifeboat and coastguard stations. The automatic time service gives over 3 million callers access to the correct time when they dial the three-letter code TIM or a figure code which connects them to a speaking clock. A telephone weather forecast service is available in eight cities. In London, a telephone information service provides details in English, French and German of important events being held in and around the capital on the day of the call.

Overseas Telecommunications

All the overseas telephone services from the United Kingdom have for a great many years been developed and operated by the Post Office. The overseas telegraph services, on the other hand, were shared until 1950 between the Post Office and Cable and Wireless Ltd. This company was brought into public ownership in 1947; the Post Office acquired the United Kingdom services, and operates all overseas telecommunications services from the United Kingdom, except for those offered by foreign telegraph companies. Cable and Wireless Ltd., now a Government agency, continues to operate its cable and wireless services in many colonial and foreign territories.

The overseas telegraph, telex and telephone services are operated from international centres in London under the general title of *Post Office Cable and Wireless Services*.

Telegraphs. Telegraph services to overseas countries are operated from Electra House, Victoria Embankment, London. In the year ended 31st March, 1958, 11.5 million messages were transmitted from London, and a similar number received.

Telex. The International Telex Exchange provides a teleprinter service to 40 countries abroad. In 1957-58, 1.6 million outgoing international calls were made, and a similar number received from abroad. Early in 1961, facilities will be extended enabling subscribers in the United Kingdom to dial direct to many European countries.

Telephones. Telephone service to European countries is through the Continental Exchange in London, from which some 653 direct telephone circuits radiate to 20 continental countries. These circuits, over which calls can be connected to almost every country in Europe, are also used to send and receive pictures, and special circuits are used for broadcast transmissions. In 1957-58, 2.25 million outgoing calls were made. Automatic dialling by operators to subscribers in certain European countries has been introduced on a small scale, and will be developed progressively. Radio circuits which provide service with most countries outside Europe and with many of the larger liners at sea are connected through the International Exchange (also in London).

On 25th September, 1956, the first transatlantic telephone cable—also the first long-distance submarine telephone system in the world—was inaugurated. The cable provides 43 telephone circuits with the United States and 13 with Canada. Nine circuits are used to provide direct telephone communication between the United States and eight continental countries. In addition to the telephone circuits, the cable carries 24 telegraph channels to Canada, thereby supplementing the existing telegraph cables and improving communications with Australia and New Zealand via Canada. The system provides a secure service that is dependable day and night and quite free from the uncertainties, distortions and fadeouts that affect the transatlantic radiotelephone circuits. The whole project was undertaken jointly by the United Kingdom Post Office, the American Telephone and Telegraph Company and the Canadian Overseas Telecommunication Corporation, which jointly maintain it. Before the cable was used, the weekly averages of radio calls between London and Canada and between London and the United States were 530 and 2,320, respectively. By the end of 1958, traffic had risen to weekly averages of 2,000 and 5,500.

Another transatlantic cable is to be laid by the Post Office cable ship *HMTS Monarch*, between Scotland and Newfoundland, by 1961, at a cost of £9 million, and will provide capacity for at least 60 simultaneous telephone conversations. It will form part of the projected round-the-world Commonwealth telephone cable agreed in principle at the Commonwealth Trade and Economic Conference held in Montreal in 1958. The first telephone cable between the United Kingdom and Sweden is to be laid in 1960, and one between Scotland, the Faroe Islands and Iceland in 1961; later, this will link with a cable from Iceland via Greenland to Canada.

A new cable ship of 4,000 tons is to be built for the Post Office, at a cost of about £1.5 million. It will be used mainly for the maintenance of cables in the north Atlantic.

The United Kingdom is a member of the International Telecommunication Union, which is the co-ordinating body for telecommunications throughout the world, and has its headquarters at Geneva.

Ship-to-Shore Radio Communications

In addition to the radio stations for overseas telecommunications, the Post Office has 11 coast radio stations in the United Kingdom. These stations provide for radiotelegraph and radiotelephone communications with ships at sea at ranges of up to some 300 miles. There is also the long-distance radiotelegraph station at Burnham-on-Sea, which communicates with ships in all parts of the world.

These coast stations play an important part in the services concerned with safety of life at sea. They keep continuous watch on the international radiotelegraph and radiotelephone frequencies for distress calls from ships or aircraft and take immediate action to obtain assistance for any vessel in distress. During 1958, the stations handled 252 urgent and SOS calls from ships and aircraft.

In addition to the services for safety of life at sea, the stations exchange radiotelegrams with ships, connect radiotelephone calls between telephone subscribers ashore and suitably equipped ships, broadcast navigational warnings and weather bulletins, and operate direction-finding services for ships.

The stations also operate a free medical advice service whereby the Master of a ship of any nationality may obtain advice from appropriate medical authorities on the treatment to be given in cases of sickness or injury aboard ship. During 1958, the stations dealt with 385 medical inquiries in this service.

The Post Office Counter: Agency and Direct Services

At the post office counter the citizen can draw his pension and his family allowance, buy a licence for his gun, dog, sound radio or television receiving set, renew his car licence and buy national insurance stamps and premium bonds. In most of these and many similar transactions the Post Office is an agent for other Government departments or local authorities. Largely as a result of the extension of social legislation and the widening scope of the social services, the volume of work measured on a time basis at post office counters has increased greatly compared with the total for 1938-39. In the twenty years to 1957-58, the value of transactions with the public increased from just over £1,000 million to £5,099 million. In 1957-58, the Post Office paid out 38 million postal drafts in payment of benefits under the National Insurance Scheme, and sold £57 million worth of premium bonds.¹

Counter sales include also an increasing volume of direct Post Office business: during the year ended 31st March, 1958, about 671 million postal orders were issued by post offices. The work of the Post Office Savings Bank is described in Chapter XII (Finance) on pp. 437-8.

¹ Post Office engineers were responsible for the development of ERNIE, the electronic random number indicating equipment used for selecting winning premium bond numbers.

XI. LABOUR

MANPOWER

The total working population of Great Britain at end-June 1959 was about 24 million, some 48 per cent of the total population, and included about 72 per cent of persons of normal working age (15 years to 59 years for women, 15 years to 64 years for men). In fact, about 95 per cent of British men of working age are today in or seeking gainful work. The remaining 5 per cent consist mainly of those continuing their education, of the severely disabled and of some persons of private means. The proportion of women of working age in or seeking gainful work is much lower, about 48 per cent, as many housewives have no wish to take employment outside the home, or if they have, are prevented by household duties from doing so. Besides those of normal working age, there are nearly 1½ million older men and women still at work. The great majority of the working population work for a wage or salary, but between 1½ and 1¾ million are employers or self-employed.

The situation is markedly different in Northern Ireland, where the ratio of working to total population is under 40 per cent, and farmers and smallholders working their own holdings account for about an eighth of the working population. Northern Ireland, however, has under 3 per cent of the United Kingdom population, so that the figures for Great Britain are broadly representative of the position in the United Kingdom as a whole.

During the present century, decreases in both birth and death rates have had the effect of increasing the proportion of both the total population and the working population over the age of 35 years. Changes in social habits have also had their effect. The minimum working age has been raised to 15 years. The proportion of those over the normal working age who are occupied has declined (though the great increase in the number of older persons has meant that the actual number who are working has increased). The proportion of men aged 20 to 64 who are at work has remained high and fairly uniform. Among women, on the other hand, there has been a steady increase during the century in the proportions employed in the age groups 15 to 59, but this has been offset by the raising of the minimum working age and by a decrease in the proportion of women employed above the age of 59. There has been a considerable increase in the employment of married women during this century, most noticeably in the last twenty years.

The proportion of women at work is generally higher for single than for married women of the same age and for younger as compared with older women of the same marital status. Thus in 1951 only 16 per cent of married women aged 55 to 59 were at work compared with 37 per cent of married women aged 20 to 24. About one-half of the female labour force is under 35 years of age, though an increasing number of middle-aged women have recently been taking work, including part-time work.

The total working population (including men and women in the armed forces) rose considerably during the second world war when housewives, including mothers of young children, manned war factories at great personal inconvenience, while men served in the armed forces. From the end of the war until mid-1947, the size of the working population declined as women left industry and the growth of the population of working age slowed down, largely because of the low birth rates of the 1930s. However, after remaining fairly steady from mid-1948 to mid-1949, the total

working population tended to rise until the autumn of 1957, but has since fallen slightly. Owing to the high birth rate in the years 1944-49, a fairly rapid increase in the population of working age, and therefore in the working population, is expected in the next five years.

The broad changes in the manpower position in Great Britain between mid-1948 and mid-1959 are shown in Table 26. Figures for mid-1959 are provisional.

TABLE 26
GENERAL MANPOWER POSITION IN GREAT BRITAIN

Thousands

	End- June 1948	End- June 1958	End- June 1959
Total Working Population: (a)			
Men	15,657	16,160	16,063
Women	7,123	7,910	7,905
TOTALS	22,780	24,070	23,968
H.M. Forces (including Women's Services):			
Men	807	600	550
Women	39	14	15
TOTALS	846	614	565
Registered Unemployed: (b)			
Wholly unemployed	273	370	379
Temporarily stopped (c)	9	62	24
Number in Civil Employment:			
Men	14,549	15,288	15,234
Women	7,020	7,792	7,786
TOTALS	21,569	23,080	23,020

Source: Ministry of Labour and National Service.

(a) The total working population represents the estimated total number of persons aged 15 and over who work for pay or gain, or register themselves as available for such work. The total comprises the armed forces, men and women on release leave not yet in employment, all persons—employers and workers on their own account as well as employees—in civil employment (including persons temporarily laid off but still on the employers' pay-rolls) and wholly unemployed persons registered for employment. Part-time workers are counted as full units. The number of persons on release leave is not shown separately as it has been small in recent years.

(b) The unemployment figures are end-month estimates.

(c) The figures for the 'temporarily stopped' have been excluded from the computation of the total working population, as they are already included in civil employment.

Deployment of Labour

Nearly 43 per cent of those in civil employment are employed in the mining and manufacturing industries and only about 4½ per cent in agriculture and fisheries,

even at the height of summer. Over half of those in manufacturing are in the metals, engineering, vehicles and chemicals groups of industries, in which the total labour force has approximately doubled in the last 25 years.

Most industries employ women as well as men, but there are jobs, such as underground work in coal mines, which are forbidden to women. The industrial groups in which women are chiefly employed are in the metal-using industries, in the manufacture of textiles and clothing, in the food, drink and tobacco industries, and in the distributive trades and professional and miscellaneous services.

An analysis of the total number in civil employment by broad industrial groups is given in Table 27. Figures for mid-1959 are provisional.

TABLE 27
ANALYSIS OF CIVIL EMPLOYMENT IN GREAT BRITAIN

Thousands

Industry or Service	End- June 1948	End- June 1958	End- June 1959
Agriculture and fisheries	1,178	1,009	1,000
Mining and quarrying	876	854	824
Manufacturing industries:			
<i>Chemical and allied trades</i>	441	537	539
<i>Metals, engineering and vehicles</i>	3,944	4,604	4,574
<i>Textiles</i>	931	871	850
<i>Clothing</i>	649	642	637
<i>Food, drink and tobacco</i>	750	925	932
<i>Other manufactures</i>	1,422	1,568	1,578
Totals in manufacturing industries	8,137	9,147	9,110
Building and contracting	1,450	1,492	1,506
Gas, electricity and water	321	375	373
Transport and communications	1,787	1,705	1,673
Distributive trades	2,484	2,939	2,955
Professional, financial and miscellaneous services	3,954	4,258	4,278
Central Government Service	682	529	520
Local Government Service	700	772	781
TOTALS IN CIVIL EMPLOYMENT ..	21,569	23,080	23,020

Source: Ministry of Labour and National Service.

The figures in Table 27 include those engaged on administrative and clerical work, so that the numbers engaged on productive processes are smaller than those given for the industries as a whole. The 1951 Censuses of Population showed that less than a third of men at work and less than a quarter of women at work were employed in manual occupations in mining or manufacturing industry. On the other hand, there were in Great Britain at the time of the 1951 Censuses of Population over 1,400,000 women clerical workers (including typists), over 800,000 in retail trade, over one million women domestic workers or charwomen (including those in

hotels, institutions and offices), 500,000 women in various other forms of personal service (including catering), nearly a quarter of a million nurses, and 220,000 women teachers.

Considerable changes in the distribution of persons between various industries and occupations have taken place during the twentieth century. Some short-term changes were brought about by the two world wars and by the severe trade recession and unemployment of the inter-war years, but the following appear to be the main long-term trends:

1. A continuance at a decreasing rate of the decline in agricultural employment which was rapid at the end of the nineteenth century.
2. A general increase in administrative and clerical employment, including public administration, and a very large increase in the employment of women in clerical work, including typing.
3. A decline in employment in certain large old-established industries, notably coalmining and cotton textiles.
4. A very large increase in employment in the metals, engineering and vehicles group of industries and the chemicals group of industries. Employment in these industries approximately doubled between 1931 and 1951. Expansion has been most marked in those sections of the industries making relatively new types of products, e.g., cars, aircraft, electrical and electronic apparatus and plastics. The rate of increase in certain branches of these industries was accelerated during both world wars.
5. A decline in indoor private domestic service in which the number of women employed fell by about a million between 1901 and 1951.
6. A considerable increase in the numbers employed in the distributive trades. This long-term trend was reversed only during the two world wars.

Unemployment and Labour Demand

Since the end of the second world war, unemployment in all parts of Great Britain has been very much less than in the period between the two world wars, when the general rate ranged between 9 and 22 per cent. From 1945 to 1957, the unemployment rate in Great Britain (the ratio of the number of unemployed to the total number of employees) ranged between 1 and 2 per cent, except during January and February 1947 when, because coal supplies failed, the unemployment rate reached the temporary peak of over 11 per cent (although the average rate for the year was about 2½ per cent), and during the textile slump in the second quarter of 1952 when it was 2.3 per cent. Since the autumn of 1957, the unemployment rate has been on average somewhat higher, but it has never reached 3 per cent. Unemployment has been mainly short-term, although, since the autumn of 1957, there has been some increase in the numbers unemployed for longer periods; but even during the winter of 1958-59, when unemployment rose to a peak of 621,000, nearly half the unemployed had been out of work for less than eight weeks, and less than a quarter had been out for more than six months. Two-thirds of the long-term unemployed were over forty years of age.

The decline in unemployment compared with pre-war is due partly to specific measures taken by the Government (see pp. 253-4) but, in the main, to changes in the general economic situation. The general demand for labour has been high, the number of vacancies on the registers of employment exchanges usually exceeding the number of unemployed, while the demand for certain types of skilled craftsmen has far exceeded the supply. The expansion and technological advance of industry in Britain has also increased the need for scientists, engineers and

technicians. Facilities for scientific and technical education are accordingly being expanded (see pp. 167-70 and 203-4).

Towards the end of 1957, however, there was a slackening in the general demand for labour (partly due to Government measures to combat inflation and to reduce capital expenditure) and shortages of skilled engineering workers became less pronounced. The general unemployment rate rose from 1.5 per cent in mid-December 1957, to about 2 per cent during the summer of 1958 and reached a peak of 2.8 per cent early in 1959. It has since been falling and was 1.8 per cent at mid-July 1959. The diagram below shows the annual unemployment rates in Great Britain from 1922 to 1958.

Unemployment is unevenly distributed, and is relatively severe in Scotland, in Wales, in most of Cornwall and in certain other areas, mainly coastal, in England. To help alleviate the situation in these areas, the Distribution of Industry (Industrial Finance) Act was passed in July 1958. The Act empowers the Treasury to give financial assistance to non-industrial as well as industrial undertakings in districts where there is a persistently high rate of unemployment (see p. 254). By August 1959, loans and grants totalling about £5 million had been offered to 83 successful applicants: this assistance was expected to provide over 5,370 additional jobs in the areas concerned.

UNEMPLOYMENT RATES (Great Britain)

1922 - 58

UNEMPLOYED AS PERCENTAGE
OF INSURED EMPLOYEES



Northern Ireland

The total working population of Northern Ireland—including employers and self-employed, but excluding certain unpaid helpers—was about 527,000 in June 1958 (359,000 males and 168,000 females). The largest industries are agriculture and textiles. Most of the agricultural work in Northern Ireland is done by small farmers and their families without hired help. The total manpower in agriculture, forestry and fisheries was 81,000 in mid-1958, according to the official estimates of the Ministry of Labour and National Insurance of the Northern Ireland Government, and was considerably larger according to other estimates which include unpaid helpers, but the number of insured employees in these industries was

only 19,000. The textile industry, traditionally concerned with linen, employs about 60,000 people and now makes extensive use of man-made fibres as well as natural fibres.

The unemployment rate in Northern Ireland has remained higher than in England, Wales or Scotland. In mid-July 1959 it was about 7·3 per cent of the insured employees and, since 1945, has rarely fallen below 6 per cent. The Ministry of Commerce of the Northern Ireland Government has wide powers (similar to those of the Board of Trade in development areas in Great Britain) to assist the development and diversification of industry. It is using these powers vigorously in an attempt to improve the situation (see p. 254).

GOVERNMENT EMPLOYMENT AND TRAINING SERVICES

The provision of employment services in Great Britain has been one of the principal functions of the Ministry of Labour and National Service since its inception in 1916. Northern Ireland has its own legislation in these matters which embodies the main principles of the corresponding legislation in Great Britain, but owing to the much smaller area of administration and the less favourable employment situation, the facilities available are not so comprehensive in their scope as is the case in Great Britain, and administrative arrangements are in some respects on different lines. The responsible department is the Ministry of Labour and National Insurance.

The following account, therefore, of services in Great Britain applies in general to Northern Ireland except where otherwise stated. The scope of the services in Great Britain has gradually been extended to include the provision of advice on employment and, in suitable cases, of vocational training. The Employment and Training Act, 1948, provided a permanent legislative basis for these wider services. The main services are provided through the country-wide network of some 900 local employment and branch employment offices, which act as employment exchanges. Local employment committees, composed of representatives of employers, workers and other local interests serving all areas, are attached to certain employment exchanges as advisory bodies to secure for the department the full benefit of local knowledge and the close co-operation of employers and workers. There are additional services intended to meet the needs of men and women who are qualified, or who are likely to qualify, for professional, administrative, managerial, senior executive and higher technical and scientific posts at home and overseas. These are operated in Great Britain as follows:

1. The Technical and Scientific Register, kept centrally in London, which deals with qualified scientists, engineers, architects and surveyors.
2. Regional Nursing Appointments Offices (10) and Nursing Appointments Offices (164), which deal with recruitment for training and employment in nursing, midwifery, radiography, physiotherapy, occupational therapy and similar professions and medical laboratory technical work.
3. The Professional and Executive Register held at certain of the larger employment exchanges of the Ministry of Labour and National Service. At these exchanges a service is maintained for all other persons qualified for professional and senior executive posts; ex-regular officers of the armed forces; and young men and women suitable for training for management in industry and commerce. Information about this service can be obtained from any local office of the ministry.

General Services for Adults

All the offices referred to above accept on their registers both employed and unemployed persons seeking employment. Their primary function is to introduce

suitable persons seeking employment to employers requiring employees, thus providing an efficient service to employers and job-seekers and meeting the needs of the national economy.

The employment exchanges holding the Professional and Executive Register are also ready to give information about the professions and allied occupations to young men and women aged 18 years and over who have not already established themselves in a profession or in the business world, and to older people who wish to change their careers. Information about this service can also be obtained from any local office of the ministry.

The reduction in the armed forces as a result of the Government's plans for the reorganisation of defence has made necessary a special service to help the many regular officers and other ranks returning to civilian life. A Regular Forces Resettlement Service, assisted by an advisory board representative of employers and trade unions, was started within the Ministry of Labour and National Service in 1957. The success of this service is indicated by the fact that the number of ex-regulars registered as unemployed rose only from 641 officers and 991 other ranks in July 1957 to 1,116 officers and 2,245 other ranks in March 1959, although in this period nearly 11,000 officers and 120,000 other ranks left the Services. By the end of June 1959 only 957 officers and 1,406 other ranks remained unemployed.

A special responsibility of the local employment offices is recruitment under the vocational training scheme. In Britain, the main responsibility for vocational training for employment below professional level rests on the industries and trades directly concerned. The main purpose of the ministry's scheme is to assist certain classes of people in special need of help to fit themselves for suitable employment, although the ministry is also concerned in helping industry to overcome shortages of labour in industries which are of special importance to national prosperity. In practice, the majority of trainees under the scheme are disabled persons and most of the remainder are men and women seeking employment after voluntary service in the regular armed forces.

The training is normally provided at one of the 14 Government Training Centres situated near the main industrial areas, but training under the scheme can in some cases be arranged at technical and commercial colleges, private training schools or employers' establishments. There are also four Residential Training Centres for the severely disabled.

A disabled person can be trained under the scheme in any occupation which offers a reasonable prospect of resettlement. A more limited range of trades is open to those leaving the regular armed forces. Other able-bodied men and women, particularly those who are unemployed and are finding special difficulty in resettlement, can be considered for training at Government Training Centres; for them a fairly wide range of trades is available if they are suitable for training. Such training is open not only to unskilled workers but also to a skilled worker whose prospects of employment in his or her existing trade is poor.

Courses vary in length according to the trade; most last for six months. Schemes of training for particular trades have been drawn up in consultation with representatives of the employers and workers concerned who have agreed that trainees should be accepted in industry for work which makes full use of the knowledge acquired during the course. Allowances are paid to trainees during training to maintain them and their dependants. These allowances are higher than the rate for unemployment benefit. Over 5,000 people were trained under the scheme in 1958 and nearly 90 per cent of them were subsequently employed in the trade for which they had been trained.

In recent years, it has been the Government's policy, in view of the increasing

numbers of older persons in the population (see pp. 11-12) and the strong general demand for manpower, to promote the employment of older men and women by persuading employers to change their approach to the problem and to alter the existing rules and procedures which made it difficult for the elderly to get and keep work. In 1952, the Minister of Labour and National Service appointed the National Advisory Committee on the Employment of Older Men and Women to advise and assist him in carrying out this policy. The committee's first report, published in October 1953 (*Cmd.* 8963), recommended that the test for engagement should be capacity and not age and that all who can give effective service should have the chance to continue in work if they so wish; and it made suggestions for overcoming any difficulties that might prevent these principles from being applied. These recommendations which were accepted by the National Joint Advisory Council (see p. 409), have been put into practice by the Government and by many other leading employers, and have had a favourable influence upon employers and upon public opinion in general. The committee issued its second report (*Cmd.* 9628) in December 1955, in which it reviewed developments. In November 1958, the committee was disbanded as it was considered that further work in this field could now best be carried on through the ordinary means of consultation with industry.

Special Training Services

The Ministry of Labour and National Service provides a service to industry through its scheme of Training Within Industry for Supervisors. The four programmes of instruction which comprise the TWI scheme are: job relations, the fostering of good working relationships; job instruction, the technique of instructing or directing staff; job methods, the steps taken in planning the best way of doing a job; and job safety, which seeks to arouse safety consciousness and to train supervisors to detect dangers and deal with them.

The ministry employs a small staff of TWI officers, whose work is mainly directed to the training of firms' TWI instructors, who then train the supervisors in their own organisations by the group discussion method. The ministry is prepared to extend a measure of these services to overseas branches of British firms. It is prepared also to train suitable persons to develop the scheme in their own territories. The arrangements may be made by the Government of the country concerned or (where appropriate) by the International Labour Organisation.

In addition, the ministry's Technical Staff College at Letchworth, Hertfordshire, provides two-week courses in teaching methods for persons responsible for the training of apprentices and other workers. These courses have been made available to all firms and to overseas countries for the training of suitable persons to undertake the instruction of skilled workers in their own territories.

Services for Foreigners

Foreigners are admitted to the United Kingdom to take up employment with a particular employer, provided they are in possession of a permit issued to the prospective employer by the Ministry of Labour and National Service (the Ministry of Labour and National Insurance for Northern Ireland if the proposed employment is in Northern Ireland). Employment is limited to a maximum of one year in the first instance but may be extended on application by the employer. In certain circumstances, permission may be given by the Home Office for foreigners who landed as visitors or students to take employment approved by the ministry. Approval is subject to the same conditions and requirements as are applied to the issue of permits to foreigners while still abroad.

Before a permit is issued, the ministry must be satisfied that there is a *bona fide* job, that no suitable British or foreign worker already resident in Britain for a long period is available, and that the wages and conditions of employment are not less favourable than those enjoyed by British workers. These conditions are waived for student employees who are admitted for limited periods in order to improve their English and to gain a wider knowledge of their occupations.

A foreigner permitted to take employment in the United Kingdom may not change his employment, unless his prospective employer has obtained prior approval from the ministry to employ the foreigner. About 40,000 permits are issued each year to bring in individual foreigners to work in Britain. Of these, approximately one-half are for domestic workers in hospitals, schools, other institutions and private households, and one-eighth for student employees.

The permit system applies to individual foreigners. In addition, after the second world war, far greater numbers were admitted under various schemes organised by the Ministry of Labour and National Service, notably the resettlement of members of the Polish Forces who felt themselves unable to return to post-war Poland, and the recruitment of European volunteer workers from the displaced persons' camps in Germany, Austria and Denmark. More recently, the United Kingdom Government has admitted many Hungarian refugees who fled from their country following the uprising in October 1956 (see p. 13), and there is a current scheme whereby the ministry assists in the bulk recruitment of Italian workers. Special arrangements are made to dispense with the need for individual permits in these cases.

The United Kingdom, as a member of the Western European Union, participates in the arrangements for assisting nationals of the countries concerned to obtain employment in other member countries.

It must be stressed that these controls over entry and employment apply only to citizens of foreign countries. Except as regards employment in Northern Ireland, there are no such controls over persons from Commonwealth countries and territories overseas and citizens of the Irish Republic. There are no current records of the numbers now resident or in employment, but information about the numbers of such persons resident in 1951 is available from the population censuses (see p. 14).

Youth Employment Service

The Ministry of Labour and National Service is also responsible in Great Britain for two specialised employment services: the Youth Employment Service and the Disablement Resettlement Service.

The purpose of the Youth Employment Service is to help young people leaving school and young workers under 18 years of age at the start of their working life.

The service is under the general direction of the Central Youth Employment Executive, staffed by officers of the Ministry of Labour and National Service, the Ministry of Education and the Scottish Education Department. This joint executive is appointed by the Minister of Labour and National Service, who is responsible to Parliament for the Youth Employment Service as a whole. The minister has appointed a National Youth Employment Council and separate advisory committees for Scotland and for Wales to advise him on questions relating to the service.

Locally the service is operated in most areas through Youth Employment Offices established by local education authorities (in Scotland by education authorities) in accordance with the schemes submitted by them to the Minister of Labour and National Service and approved by him. In those areas where such schemes are not in operation, the service is operated by the local office of the Ministry of Labour and National Service.

The main functions of the service are to collect and disseminate information on careers, provide talks in schools, give vocational guidance, help to find suitable employment and keep contact with young workers to assist them in settling down. A further function is to assist employers in filling vacancies for young people. Local youth employment committees, made up of teachers, employers, workers and other appropriate interests, assist the service in an advisory capacity.

In Northern Ireland, a Youth Employment Service of more limited scope is operated by the Ministry of Labour and National Insurance, and in co-operation with this service, one local education authority provides a Vocational Guidance Service. A comprehensive Youth Employment Service similar in scope to that operating in Great Britain is now being set up.

Disablement Resettlement Service

The Disabled Persons (Employment) Act, 1944, on which all the ministry's work for disabled persons is based, declares that its purpose is 'to make further and better provision for enabling persons handicapped by disablement to secure employment or work on their own account', and the Disablement Resettlement Service is designed to help disabled persons to get and keep suitable work. The service is available to all persons over school-leaving age who are substantially handicapped as a result of injury, disease or congenital deformity.

The Ministry of Labour and National Service is responsible for the administration of the service. At each of its local offices a disablement resettlement officer, working under the direction of the manager and in co-operation with other officers, has the duty of advising and assisting disabled persons in obtaining suitable employment. This officer is in touch with all the hospitals in his area and visits any patient who wishes to discuss the question of future employment. His work involves close co-operation with doctors, local authorities and voluntary welfare agencies.

The help given by the service falls under four main headings:

1. *Vocational Guidance.* This is given at local offices by disablement resettlement officers in consultation, as necessary, with the local disablement advisory committees, hospital resettlement clinics and medical interviewing committees, and also by vocational psychologists in the industrial rehabilitation units (see paragraph 3).

2. *Placing in Ordinary Competitive Employment.* On the basis of a disabled person's qualifications and aptitude, and with medical guidance, the disablement resettlement officer endeavours to find the work most suited to each person, either immediately, or after a course of industrial rehabilitation or vocational training. To a limited extent this is facilitated by the main provision of the Disabled Persons Employment Act, 1944, namely, that all employers of 20 or more persons are required to employ a quota (at present 3 per cent for all industries except shipping, in respect of the manning of ships) of registered disabled persons. Registration is voluntary. The number of disabled persons registered in April 1959 was 715,825. At the same date 59,671 registered disabled were unemployed, 55,470 being considered capable of ordinary employment. This latter figure is 7.7 per cent of the total number of registered disabled persons. Many persons so severely disabled as to be classed as incapable of ordinary employment are nevertheless being found work in unsubsidised competitive undertakings by careful selective placement.

3. *Industrial Rehabilitation and Vocational Training.* Industrial rehabilitation is provided at residential and non-residential units run by the Ministry of Labour and

National Service where physical and mental toning-up is given and, for those who need it, vocational guidance as to the best kind of employment to take up.¹

There are vocational training facilities for the disabled at Government Training Centres, educational institutions and employers' establishments. For the more seriously disabled there are special residential training colleges run by voluntary organisations with the financial assistance and technical help of the Ministry of Labour and National Service. There are also arrangements for the training of special categories of disabled persons such as the blind, and for providing disabled persons (including the blind), who are of the appropriate educational standard, with grants to undertake study and training for the purpose of acquiring professional qualifications.

4. *Sheltered Employment.* Remploy Ltd., a non-profit-making public company, with no share capital, was established in Great Britain in accordance with the provisions of the Disabled Persons (Employment) Act, 1944. Its objects are to provide training and employment facilities for registered disabled persons who are unlikely to obtain work except under special conditions. Its powers are wide enough to cover the provision of special factories and workshops, hostel accommodation and facilities for home workers. The directors are appointed by the Minister of Labour and National Service; funds for capital development and to meet operational costs are provided by loans and grants under the Ministry of Labour Vote. At the end of 1958, Remploy Ltd. operated 90 factories and employed 6,100 severely disabled men and women, including approximately 100 homeworkers.

Facilities for the employment of blind persons are provided by local authorities directly or through voluntary bodies, with the financial assistance of the Ministry of Labour and National Service. At end-December 1958, there were 68 workshops for the blind in which there were 267 blind persons in training and 3,760 in employment. The ministry also helped to finance the provision of training or employment for 936 severely disabled sighted persons in 42 workshops provided by 35 voluntary undertakings or local authorities. Some 1,200 blind persons were also working at home under homeworkers' schemes.

TERMS OF EMPLOYMENT AND WORKING CONDITIONS

At the beginning of the nineteenth century, industrial workers lacked legitimate means of defending their standards of living or of ameliorating their working conditions. The traditional methods of fixing wages had become obsolete, trade unions were regarded as criminal conspiracies, and there was no protective legislation setting minimum standards of safety, health and welfare in places of work.

The first attempt at protective legislation was the Health and Morals of Apprentices Act, 1802, but the first effective Factory Act was that of 1833 which created an inspectorate employed and paid by the central Government to enforce its provisions. Since that date, legislation extending, strengthening, adapting and consolidating the statutory protection for employees has been passed at an accelerating rate. The progress in standards has owed much to the recommendations of strengthened inspectorates, much to the example of progressive employers and much to the persistent pressure of trade unions and disinterested reformers.

Trade unions ceased to be actionable conspiracies in 1824 but their status as legal entities was not properly established until 1871. This latter step had been made acceptable to public opinion by the leaders of certain craft unions, who had abandoned the revolutionary and financially unsound policies of earlier trade unions to

¹ For an account of medical rehabilitation of the disabled, see pp. 150-1.

pursue a limited practical objective, i.e. the improvement of their members' wages and conditions through skilful and honest negotiation from positions of financial strength.

After 1880, the organisation of unskilled workers became more extensive and effective and the whole tone of trade unionism became more militant and political. At the same time, many employers were still hostile to trade unionism and were unwilling to negotiate with trade unions or to recognise agreements made on an industry-wide basis. Partly as a result of continuing antagonisms and of the changing and difficult economic situation, much of the first thirty years of the twentieth century was marked by widespread and prolonged strikes. Since 1932, however, the strike rate (in terms of man-days lost) has, in most years, been very much lower, and arrangements for the negotiation of terms of service and the peaceful settlement of disputes have become general and are on the whole satisfactory.

Today, minimum standards have been established by statute or collective agreement for both the terms and conditions of employment and the working conditions of most British workers. Terms and conditions of employment of the majority of workers are usually settled by collective agreements between employers' associations and trade unions, and the fixing by statute of minimum wages is confined to those trades or industries where the organisation of employers or workers or both is inadequate to negotiate collective agreements and to ensure their observance.

Standards for working conditions are laid down by statute, e.g., the Factories Acts, and it is the duty of Government inspectors and local authority inspectors to enforce their provisions. The various Acts of Parliament, and statutory regulations made thereunder, prescribe standards of safety, health and welfare for a large proportion of workers, and regulate the hours of work for women and young persons. Health, safety or welfare requirements, additional to these statutory requirements, have, in some cases, been the subject of collective agreement.

Many employers provide working conditions superior to those prescribed by statute or agreement, and various Government departments and voluntary bodies advise and assist in improving these standards.

LABOUR RELATIONS

The structure of labour relations in Britain is established mainly on a voluntary basis, and rests on the organisation of employers and workers into employers' associations and trade unions. These organisations¹ discuss and negotiate terms and conditions of employment and other matters affecting the workpeople at their work. In some industries these negotiations are conducted simply by *ad hoc* meetings, which are held when necessary; in others, voluntary joint machinery has been established on a permanent basis. Normally these arrangements for collective bargaining suffice to settle all questions which are raised, but provision is often made for matters not so settled to be referred for settlement to independent arbitration. In certain trades where wages cannot be effectively controlled by voluntary agreement owing to the inadequate organisation of employers or workers, provision has also been made by the State for statutory regulation under the Wages Councils Acts, 1945 to 1959, the Agricultural Wages Act, 1948, and the Agricultural Wages (Scotland) Act, 1949.

¹ A few employers, including the central Government and the public corporations operating the nationalised industries, negotiate directly with the trade unions representing their different types of employees.

Employers' Organisations

Many employers in Great Britain are members of employers' associations, some of which have their origins in the nineteenth century. They are generally organised on an 'industry basis', some being purely local in character and dealing with a section of an industry only, while others have a national scope and concern themselves with the whole of an industry. In some cases the local associations are organised into district or national federations. Many of the associations are concerned with industrial and trade matters as well as labour matters (see pp. 257-8).

The central organ of employers' associations is the *British Employers' Confederation*, to which the majority of employers' associations and federations in the principal industries are affiliated. It deals with matters affecting the interests of organised employers in their relations with their workpeople, and is recognised by the Government as the channel of consultation between Government departments and representatives of private employers as a whole on all such matters.

The confederation acts for its member organisations in an advisory and consultative capacity, providing them with information and statistics, ascertaining and acting upon their collective views and representing these nationally to the Government and the public, and internationally to such bodies as the International Labour Organisation, the International Organisation of Employers, and the Council of European Industrial Federations.

While the main function of employers' organisations consists in the safeguarding of the interests of their members, a number consider that this purpose can be furthered by the provision of advice and assistance to member firms and by such special services as the organisation of general training courses and special courses on, for example, work study and its application. Where employers' organisations do not themselves provide such services they make arrangements for putting their members in touch with the appropriate specialist agency.

Trade Unions

In nearly all industries and occupations some workers—and in some industries nearly all workers—are organised into trade unions. These have grown up gradually and independently over a great many years, and consequently their form and organisation vary considerably. Trade unions started more than two hundred years ago among the skilled craftsmen and spread later to the general labouring and unskilled classes. More recently trade unionism has increased among clerical, supervisory, technical and administrative workers. A number of associations of professional workers, formed primarily for the preservation and improvement of professional standards, have also come to exercise many of the functions of trade unions, including negotiations on salary and fee scales, and are legally trade unions.

The qualification for membership of some unions is occupational, e.g., they may recruit clerks or fitters wherever employed, while in others the qualification is industrial, i.e. they seek to recruit all persons in an industry, whatever their occupation. In a number of unions, recruitment is based on a combination of these principles. A few large unions recruit members in a number of different occupations and industries.

At the end of 1957, the total membership of British trade unions was about 9,700,000 (but it probably fell by 200,000 in 1958). There were 647 trade unions, but about two-thirds of all trade unionists were in the 17 largest unions.

The basic unit of organisation in most British trade unions is the local branch or lodge. Every member of the union belongs to a branch or lodge. He may attend its meetings, put forward suggestions about terms and conditions of employment,

discuss the work and policy of the union, and take part in the election of branch officers. The branch takes action on certain matters considered to be entirely, or mainly, of local interest but refers wider issues to the union's national or regional bodies.

Many unions also have shop stewards or other representatives at the place of work to enrol members and collect dues, to report any encroachment on agreed or customary conditions of work, and, in some cases, to act as representatives of members at their place of work for the settlement of grievances.

In most large unions the central organisation is along the following lines. Elected officials, including a general secretary assisted by clerical and specialist staff, are in charge of the work of the head office and are responsible to a national executive council or committee which may be part-time or full-time, and which is usually elected by, and responsible to, annual or biennial conferences of delegates from the branches.

Executive committees or councils play an important part in the government of the unions; between conferences they are the highest authorities and carry out policy decisions made by delegates.

Most unions also have some kind of regional, district or area organisation, while in large unions there is usually also a system of regional, district or area committees or councils.

Trade unions may affiliate to one or more federations or confederations whose main purpose in most cases is to represent all or most of the trade unions in an industry in negotiation with employers. The scope and authority of these federations and confederations vary greatly in different circumstances.

Nearly all trade unions of any size and importance are affiliated to the *Trades Union Congress* (TUC), the national centre of the British trade union movement. The main exceptions are the National and Local Government Officers Association (NALGO), the National Union of Teachers (NUT), and certain Civil Service staff associations, all of them professional or quasi-professional bodies. The objects of the TUC are to promote the interests of all its affiliated organisations and generally to improve the economic and social conditions of the workers. Its membership comprises 186 organisations, of which about a dozen are federations of some 150 separate unions; approximately 350 unions in all are affiliated directly or indirectly. These represent over 8 million workpeople. The TUC deals with all general questions which concern trade unions both nationally and internationally and gives assistance on questions relating to particular trades or industries at the request of the trade union concerned. The congress of delegates, which constitutes the TUC proper, meets for a week every year to discuss matters of general interest to trade unionists and to employees generally.

It elects annually a General Council which represents it during the remaining 51 weeks of the year. The General Council is responsible for carrying out congress decisions, for watching economic and social developments, and for providing educational and advisory services. It is also empowered in certain circumstances to mediate in inter-union disputes.

Both the TUC and a number of affiliated trade unions have in recent years paid increasing attention to the education of their members, not only in general economic questions and trade union practice, but also in production and management subjects, including work study and costing. The educational work of the TUC is being considerably expanded. Its headquarters, Congress House, in London, includes a training college, which aims each year to give some 1,000 trade unionists courses lasting one or two weeks on general trade union subjects, on production and management techniques, on industrial finance, on industrial relations and on social insurance.

The TUC also organises summer schools, open to members of any affiliated union, usually by nomination from the union, and week-end schools attended by nominees of trades councils. A number of the larger unions hold similar courses. In addition, arrangements are made for union officials to attend courses on production and management at technical colleges. Some unions also make use of industrial consultants for this purpose.

The TUC is recognised by the Government as the channel of consultation between the Government departments and representatives of organised workers on matters affecting the interests of employees generally.

There is also a separate Scottish Trades Union Congress, to which trade unions may affiliate in respect of their membership in Scotland.

The TUC is a non-political body, but individual trade unions can, by a ballot vote of members, decide to set up a political fund, financed by a separate levy, which any member can refuse to pay without loss of his normal trade union rights and benefits. About 80 separate trade union organisations, including most of the largest trade unions, have such a fund and, in almost every case, it is used to support the Labour Party (or the Co-operative Party).

Branches of various trade unions in a locality generally affiliate to a local trades council, which acts as a forum for the discussion of matters of common interest and as a local agent of the TUC, by which it is registered each year. There are more than 500 trades councils in England and Wales alone, grouped together in 22 federations.

Voluntary Joint Negotiating Machinery

At National Level. While in some industries all matters affecting terms and conditions of employment are discussed on an *ad hoc* basis between the employers' organisations and the trade unions concerned, in other industries there are standard procedures for dealing with such matters by joint discussion at a national level. In many industries there are, for this purpose, bodies composed of representatives of both sides of the industry with, in some cases, an independent chairman. These are known generally as Joint Industrial Councils, of which there are about 200. The functions of these bodies vary considerably, some being simply negotiating bodies, while others deal with a wide range of subjects affecting the interests of the industry concerned. Provision is sometimes made in the constitution of such bodies that, where it is not found possible to reach agreed terms of settlement in a particular dispute, the matter should be referred to some form of conciliation or arbitration by independent persons, including the methods provided under the Conciliation Act, 1896, or the Industrial Courts Act, 1919.

Collective agreements between employers' associations and trade unions are not civil contracts between particular employers and employees, and are not, therefore, in themselves enforceable at law. Observance of agreed terms and conditions is based mainly on the good faith of employers and the mutual respect and vigilance of trade unions and employers' associations, but can be secured in particular instances through reference to the Industrial Court (see p. 408).

At District and Factory Level. Arrangements for negotiation and discussion also exist at district and factory level in many industries, where matters are discussed either between the appropriate representatives of the two sides on an *ad hoc* basis, or through regular machinery provided by District Joint Industrial Councils or similar bodies and Works Councils. Such bodies discuss how agreements reached at a national level may be applied to their district or factory, but as a rule have no power to alter the terms of such national agreements. They also discuss new

problems which may arise, and if no solution can be found at factory or district level the matter may be referred to the national body.

Statutory Wage-Regulating Machinery

In certain industries in which, owing to the lack of organisation among employers and workers, voluntary negotiating arrangements do not exist for the effective settlement of terms and conditions of employment or are inadequate to secure their observance by voluntary methods throughout the industry, statutory bodies known as Wages Councils and Agricultural Wages Boards have been set up. These are composed of equal numbers of representatives of employers and workers in the respective industries, with the addition of certain independent members. Wages Councils are empowered to submit proposals for the fixing of minimum remuneration and of holidays with pay to the Minister of Labour and National Service, who is then required by the Acts concerned to make orders giving statutory force to such proposals, subject only to his right to return them as a whole to the council for further consideration.

Orders relating to employment in agriculture are made by the appropriate Agricultural Wages Board (England and Wales or Scotland). Such orders are effective only in the county agricultural wages committee area in respect of which they have been made, but there is a national minimum enforceable in England and Wales and also one for Scotland.

State Provision for Conciliation, Arbitration and Investigation

Matters which prove difficult to settle by negotiation are sometimes referred by agreement to independent conciliators or arbitrators, and one way in which the parties can find such persons is by invoking the help of the Minister of Labour and National Service. Under authority derived from the Conciliation Act, 1896, and the Industrial Courts Act, 1919, the minister has certain powers to assist industry to settle disputes which it is not found possible to resolve through an industry's own machinery and procedure. These powers are all intended to supplement and not to supersede the industry's own machinery.

To assist conciliation in industry, a staff of conciliation officers forms part of the Ministry of Labour and National Service. The duties of these officers are to keep in touch with the course of relations between employers and workers at national, district, and, in some cases, factory level, and to assist them, if requested, to settle their problems by joint discussion and negotiation.

Disputes which cannot be settled in this way may, at the request of both parties, be referred to voluntary arbitration, either by a single arbitrator, or an *ad hoc* Board of Arbitration, or by the *Industrial Court*, a permanent tribunal established under the Industrial Courts Act. The court normally consists of three members—the president, one member representing employers and one representing workpeople.

Like collective agreements, arbitration awards are not in themselves enforceable at law, but, under the Terms and Conditions of Employment Act, 1959, reports may be made, to the Minister of Labour and National Service, by organisations which are truly representative of the employers or workers in the trade or industry concerned, that a particular employer in that trade or industry is not observing the recognised (i.e. agreed or awarded) terms and conditions of employment. If the matter is not otherwise settled, the minister must refer it to the *Industrial Court* which, after hearing the case, may issue an award requiring the employer to observe the recognised terms and conditions. Such an award becomes an implied term of the contract of employment. This procedure, established under the 1959 Act, replaced an earlier one of similar intention and effect.

The Minister of Labour and National Service is also empowered to appoint a Court of Inquiry or Committee of Investigation into a dispute, whether existing or apprehended. These procedures are primarily means of informing public opinion of the facts of a dispute and are not means of arbitration. The report of a Court of Inquiry has to be laid before Parliament. Although the recommendations contained in the reports of such bodies are not binding on the parties, they usually provide the basis of a settlement of the difference.

The machinery for negotiation and conciliation of disputes has helped to reduce the amount of time lost in strikes and lockouts, which has been much less in the past twenty-five years than formerly. In spite of some serious stoppages of work in the past three years, the average time lost per year from 1932 to 1959 is only 2½ million man-days, or about a tenth of a day per worker per year, compared with an average of 21 million man-days in the 23 years 1910-32. The reduction has been in the size and duration of strikes and not in their number.

Liaison between the Government and Industry

The Government is in contact with representatives of employers and workers at all levels on matters affecting their common interests. At local and district level the conciliation officers of the Ministry of Labour and National Service keep in touch with the representatives of both sides of industry, while, at national level, officers of the department are requested by many Joint Industrial Councils to attend their meetings as liaison officers. Standing arrangements also exist for consultation between the Government, the British Employers' Confederation and the Trades Union Congress through the *National Joint Advisory Council*, which was set up in 1939 to advise the Government on matters in which employers and workers have a common interest. It meets quarterly under the chairmanship of the Minister of Labour and National Service. Its membership consists of representatives of the British Employers' Confederation and the Trades Union Congress, together with representatives of the managements of nationalised industries. Among the subjects which it has considered in recent years are the machinery for settling industrial disputes, joint consultation in industry, industrial training and recruitment, double-day-shift working, and the economic situation with special reference to production, wages and prices, and the efficient use of manpower.

Joint Consultation at Factory Level

In addition to the arrangements already described, the purpose of which is mainly but not exclusively the discussion and settlement of terms and conditions of employment, many factories and other establishments provide for joint consultation between management and employees through formally constituted works councils (see pp. 422-3). In many of the larger industries, national agreements recommend such consultation, and in some they even prescribe model rules for its conduct.

Labour Relations of Public Authorities

While labour relations in Government service and in the nationalised industries are, in general, organised on the same principles as in private industry, there are some special features.

Non-industrial employees in central Government service, where salaries and conditions of service are under the direct control of the Treasury, are permitted and encouraged to join the appropriate Civil Service staff associations (trade unions) and there is a highly developed system of negotiation and joint consultation by means of the National and Departmental Whitley Councils (see p. 67), corresponding to the Joint Industrial Councils in industry. The two sides of the National

Whitley Council are parties to a Civil Service Arbitration Agreement which, subject to certain limitations, provides that if there is failure to reach agreement by negotiation a department or association may report the dispute to the Minister of Labour and National Service for reference to the Civil Service Arbitration Tribunal. The tribunal is an independent one appointed by the minister by virtue of his powers under the Industrial Courts Act, 1919. Industrial employees of the central Government, however, are organised by trades and not by departments; negotiations regarding their wages and conditions of employment take place on Trade Joint Councils and Departmental Joint Councils.

In local government services there are separate National Joint Councils for the main grades of employees (e.g., manual, clerical and technical employees, and road-menders, see p. 75) which deal with wages and conditions of service as well as other matters. There are corresponding regional and district councils.

In the nationalised industries, the main corporations, though not subject to detailed governmental control, have a statutory duty to establish satisfactory arrangements for collective bargaining in their industries and for joint consultation with their employees; but in carrying out these duties they are free to choose the arrangements that suit them. In nearly every case a complex system which already existed before nationalisation has been taken over and modified. The arrangements, therefore, as in industry generally, vary substantially. The main difference from private industry is that the corporations are not members of employers' associations. In some industries they are sole or main employers, but even where part of the industry is in private hands, as for example in air or road transport, the corporations are separately and directly represented on wage-negotiating bodies.

Wages and conditions of service in the nationalised industries are generally settled by negotiation between representatives of managements and trade unions at the national level; in most cases there are also regional and local bodies, similarly representative, charged with the duty of applying these agreements and dealing with any difficulties or differences which may arise. Most of the industries use the facilities for arbitration offered to industry generally by the Ministry of Labour and National Service, but coalmining and rail transport have their own special arrangements.

The machinery for negotiation and conciliation in the United Kingdom is usually based on the industry as a whole and not on the individual establishment or firm. Accordingly, those industries, such as electricity and gas supply, where there are several corporations which act as employers, are covered by a single set of arrangements, and the duty of seeing that the arrangements are made falls on the central authorities, e.g., the Gas Council and the Electricity Council. In civil aviation, there is a single joint council at national level on which both the air corporations and the private operators are represented. Where a single public corporation engages in various activities, these may be treated as separate industries and organised separately. For example, the National Coal Board's coke and by-products plants have arrangements quite distinct from the coalmines, and the British Transport Commission's rail, road and water transport have their different methods based on individual traditions, which existed before nationalisation. In road transport (unlike civil aviation) the arrangements cover only the commission's employees; there is separate machinery for the employees of municipal and private undertakings.

Some of the nationalised industries have felt that joint consultation was best carried out by their negotiating bodies; others have established separate and specially constituted joint committees at all levels. In general, where consultation and negotiation are conducted through the same machinery, separate committees

exist for different groups or grades of employees; where the consultative and negotiating arrangements are kept apart, a single consultative committee serves all grades.

Northern Ireland

The system of labour relations in Northern Ireland is based on the same principles as that of Great Britain and, in these matters, the Minister of Labour and National Insurance has powers and duties broadly similar to those of the Minister of Labour and National Service in Great Britain. About 90 per cent of trade unionists in Northern Ireland are members of trade unions whose headquarters are in Great Britain.

WORKING CONDITIONS: THE LEGISLATIVE BACKGROUND

Employers have a duty at common law to take reasonable care of their employees and provide a safe system of working, while employees have a duty of care towards each other. In addition, minimum required standards of safety, health and welfare are laid down in a number of statutes.

The principal Acts involving enforcement of standards of safety, health or welfare are: the Public Health Acts; the Employment of Women, Young Persons and Children Act, 1920; the Children and Young Persons Act, 1933; the Employment of Women and Young Persons Act, 1936; the Young Persons (Employment) Act, 1938; the Factories Acts, 1937, 1948, and 1959; the Mines and Quarries Act, 1954; the Shops Acts, 1950; and the Agriculture (Safety, Health and Welfare Provisions) Act, 1956. There are a number of other Acts dealing with particular requirements or particular occupations.

Powers of Local Authorities

Local authorities, under the Public Health Acts, have power to regulate the provision of suitable sanitary accommodation in houses and at places of work and to treat workplaces which are dirty or badly ventilated or overcrowded as nuisances whose abatement can be enforced. They have also wide powers under the Children and Young Persons Act, 1933, as modified by the Education Acts, 1944 to 1948, to regulate hours and conditions of employment of children in their areas within the limits laid down by national legislation. Apart from this, national legislation forbids the employment of children under 13 years of age, and forbids the employment of children between the ages of 13 and 15 during school hours, or before 6 a.m. or after 8 p.m. on any day, or for more than two hours on schooldays or on Sundays. The employment of children in any industrial undertaking before they reach the age of 15 is prohibited.

Shops

The Shops Act, 1950, requires local authorities to ensure that shops in their area observe the requirements of the Act with regard to closing hours and the working conditions of employees, which include special requirements about the hours of work of young persons. The Act provides that, with certain exceptions, shops must be closed on weekdays by 8 p.m. (9 p.m. on one late day) except on the early closing day when they must be closed by 1 p.m., and all day on Sundays; but it enables local authorities to make orders modifying these and other provisions of the Act as far as their own areas are concerned. The hours of work of employees under 16 years of age are normally restricted to 44 a week, and those of employees

between 16 and 18 years of age to 48 a week with limited provision for overtime. All shop assistants must be given a half-holiday (half a day) every week and, in addition, every Sunday off or another day off instead. Local authorities also have powers to ensure reasonable minimum standards of ventilation, temperature, lighting, sanitary accommodation and washing facilities in shops.

Industrial Premises

Nearly a quarter of a million industrial premises (factories, workshops, slaughter-houses, shipyards, docks and warehouses) and about 25,000 building and civil engineering sites come under the Factories Acts, which are administered by the Ministry of Labour and National Service and enforced by H.M. Inspectorate of Factories, which forms part of the ministry. Any person intending to use premises as a factory has to notify the Inspector of Factories of his intention not less than one month before he begins to occupy them.

Under the Acts, every accident causing more than three days' incapacity must be reported to the factory inspectors; provision is also made for compulsory notification and investigation of certain industrial poisonings and diseases, and, in addition, a number of general and specific requirements for safety, health and welfare are laid down.

Safety requirements include provisions concerning the fencing of prime movers, transmission machinery and dangerous parts of other machinery; the sale, hire or use of power-driven machinery without effective guards of certain parts; the cleaning of machinery in motion; the training and supervision of young persons employed at certain machines; the examination of hoists and lifting equipment, steam boilers and steam and air receivers; the construction of floors; precautions against falls, against gassing, and against explosions of inflammable dust or gas; fire prevention, firefighting, fire alarms and means of escape in case of fire; the protection of the eyes; the handling of dangerous substances; and the lifting of heavy weights.

There are also general requirements with regard to health, including cleanliness of workrooms, the provision and maintenance of proper accommodation and ventilation and of suitable temperatures and lighting, the avoidance of over-crowding and the provision of sanitary accommodation; and with regard to welfare, including the provision of washing facilities, lockers or other accommodation for outdoor clothing, drinking water, first aid and adequate seating arrangements.

All young persons under 18 years of age must, on entry to employment in factories, at docks, or on building operations, be medically examined by doctors appointed by the Chief Inspector of Factories and known as Appointed Factory Doctors (see p. 420), and they must be re-examined annually until they reach the age of 18. Women and young persons are also prohibited from working in certain specified processes concerned with lead compounds. The hours permitted to be worked by women and young persons between the ages of 16 and 18 are generally limited to 48 in a week and 9 in a day, although some overtime is allowed (up to six hours a week but not more than 100 hours a year nor in more than 25 weeks in a year). Young persons under 16 years of age are limited to 44 hours a week. Adequate intervals for meals must be arranged for women and young persons and the employment of women and girls at night is, in general, prohibited. The Minister of Labour and National Service, however, has discretionary powers to grant applications for relaxations of the rules of the working hours if, after consulting the appropriate organisations and employers and workers, he decides that it is clearly in the public interest. Moreover, such relaxations must be published.

The general requirements for safety, health and welfare are supplemented or modified by regulations providing for safeguards against special risks to health or

safety. The regulations cover particular industries, processes, and types of machinery, and they include provision for the compulsory periodic medical examination of workers in certain specified industrial processes.

In addition to regulatory functions, the Minister of Labour and National Service has been given the duty, under the Factories Act, 1959, to promote safety, health and welfare by the collection and dissemination of information and by investigating safety, health and welfare problems. The Act thus provides a specific statutory basis for activities which have long been an important part of the ministry's work (see pp. 419-21).

Mines and Quarries

The safety, health and welfare of workers in mines and quarries are the subject of comprehensive legislation. Protective legislation in mines began with an Act of 1842, which forbade the employment of women underground; successive measures laid down detailed requirements for the safe conduct of operations and dealt with such matters as ventilation, dust suppression, support of workings, the safe use of electricity, rescue and first aid. The latest stage was reached when the Mines and Quarries Act was passed in 1954. This Act established the basic modern principles of safety, health and welfare, leaving the details to be dealt with in statutory regulations; it both consolidates the previous law and brings it up to date. Apart from technical matters, it also covers such subjects as the general responsibilities of owners and managements, the appointment and duties of officials, training, welfare, the powers of official inspectors, statutory qualifications of managers and under-managers, employment of women and young persons, and inspections on behalf of workmen.

The Ministry of Power is generally responsible for the administration of these enactments, while the Mines and Quarries Inspectorate, which is part of the Ministry of Power, is directly responsible for their enforcement.

Agriculture

Two Acts provide for the protection of agricultural workers by means of regulations made by the ministers concerned with agriculture in Great Britain. The special risks involved in the use of chemicals are dealt with in the Agriculture (Poisonous Substances) Act, 1952; general safety is covered by the Agriculture (Safety, Health and Welfare Provisions) Act, 1956.

Transport

The general safety legislation covering the main forms of transport protects transport workers as well as members of the public against accidents involving moving vehicles.

The Minister of Transport and Civil Aviation is responsible for the administration of the Merchant Shipping Acts, which cover in great detail the question of marine safety, including navigational procedures, the strength and design of hulls, the safety of machinery, the safety and design of living quarters, life-saving appliances, measures for protection against fire, and the carriage of special cargoes and dangerous goods.

The Air Navigation Order and Regulations provide for the registration of aircraft and for the issue of certificates of airworthiness and of competency certificates and licences for aircrew, lay down requirements for safety equipment and for safety procedures during take-off, flight and landing, and prescribe maintenance schedules for public transport aircraft. The minister delegates most of his powers in respect of airworthiness to the Air Registration Board (see p. 379).

The Minister of Transport and Civil Aviation exercises technical supervision of the safety aspects of railway construction and operation through an inspectorate, whose main functions are statutory approval of new works on railways carrying passenger traffic; accident investigation, including the holding of formal inquiries; and technical advice to the minister on general railway matters.

In the interests of road safety, the hours of driving and the rest periods of drivers of buses and goods vehicles are regulated by the Road Traffic Acts. In certain cases, the driver must be accompanied by a second person.

In addition to general safety legislation, there are certain statutory provisions concerned entirely, or mainly, with the safety, health and welfare of employees; for example, railway employees are protected by the Railway Employment (Prevention of Accidents) Act, 1900, and the statutory rules and orders made under it, which sanction the appointment of railway employment inspectors to inquire into the more serious accidents to railway employees and enable the Ministry of Transport and Civil Aviation to require the use of safe plant and appliances, to forbid what is unsafe, and to make rules for safe railway operation. Similarly, the far-reaching and detailed requirements of the Merchant Shipping Acts and the regulations made thereunder include specific provisions for the protection of merchant seamen covering such matters as the engagement and discharge of seamen, limitations on the employment of young persons at sea, standards of crew accommodation, scales of provisions, medicines and medical stores, and the care and repatriation of seamen left behind at ports abroad.

Employment of Young Persons

The Young Persons (Employment) Act, 1938, imposes restrictions on the hours of work of young persons (48 a week under 18 years and 44 a week under 16 years) in certain occupations not covered by the Factories Acts, the Mines and Quarries Act, 1954, or the Shops Act, 1950.

Northern Ireland

The safety, health and welfare of employees in Northern Ireland have been the subject of legislation which, with certain exceptions, is similar to that in Great Britain and is embodied in separate statutes to meet the special requirements of Northern Ireland. Provision for the safety, health and welfare of workers in factories, workshops, ship and building yards and certain other working premises is embodied in the Northern Ireland Factories Acts. The Minister of Labour and National Insurance is responsible for the administration of these Acts and for their enforcement by a factory inspectorate, which forms part of his department.

WORKING CONDITIONS IN PRACTICE

Earnings

Minimum or standard time rates for most British manual workers, as determined by agreements or wages orders, vary between 3s. 1d. and 4s. 3d. an hour for men and between 2s. 1d. and 3s. 1d. for women. Actual earnings are usually higher. Higher rates are sometimes paid, and piece rates, shift rates and overtime rates raise the level of average earnings. The Ministry of Labour and National Service conducts a six-monthly survey of earnings and hours of work of manual workers in manufacturing industries and in some of the principal non-manufacturing industries in Great Britain. The survey made in April 1959 covered just under 7 million

workers and showed the average hourly earnings in all the industries covered to be as follows:

Men 21 years and over	..	..	..	..	5s. 5.5d.
Youths and boys under 21 years	..	..	..	..	2s. 6.7d.
Women 18 years and over	..	..	..	..	3s. 3.6d.
Girls under 18 years	..	..	..	..	2s. 0.8d.
All workers	..	..	..	..	4s. 9.6d.

Average weekly earnings were:

Men	..	..	..	..	..	..	262s. 11d.
Youths	..	..	..	..	..	..	114s. 0d.
Women	..	..	..	..	..	..	137s. 0d.
Girls	..	..	..	..	..	..	87s. 4d.
All workers	..	..	..	..	..	..	222s. 6d.

The principal industries not covered by this survey of earnings were agriculture, where the average weekly earnings for regular adult male workers were 193s. 9½d. in the half year October 1958 to March 1959; coalmining, where according to information collected by the National Coal Board, the average weekly cash earnings for men were 312s. 6d., plus 18s. 5d. in kind, in April 1959; railway services, in which average weekly earnings in March 1958 were 235s. for men in the workshop and other wage-earning grades, and 147s. for women; and dock labour, in which average weekly earnings of dock workers employed by the National Dock Labour Board for January to March 1959 were 292s. 8d.

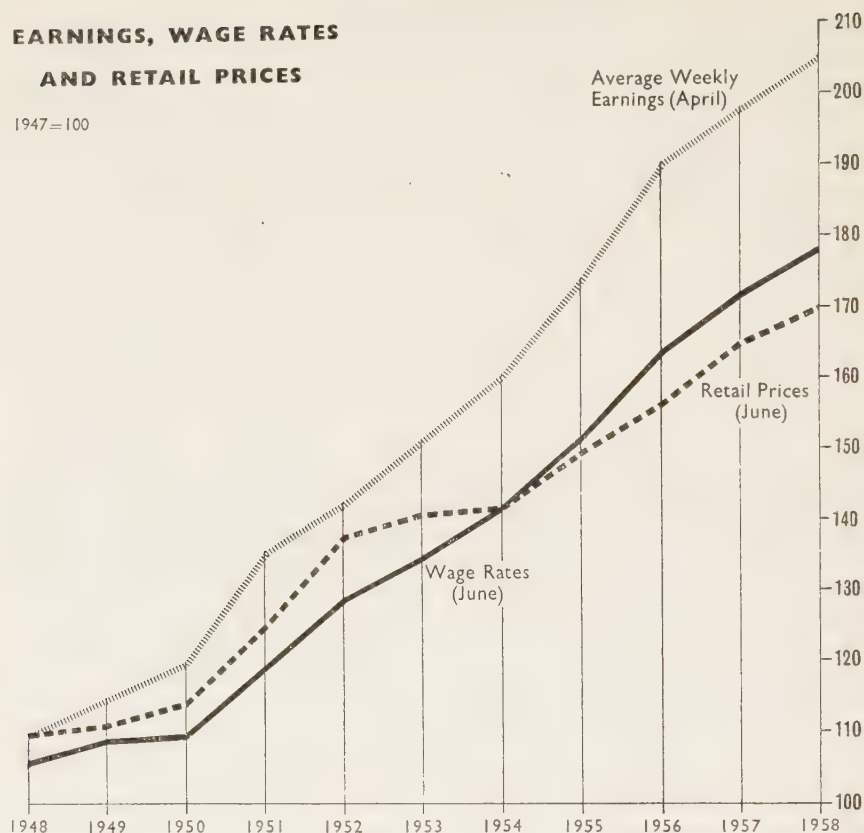
Since 1947, average weekly wage rates have increased by about 80 per cent and average weekly earnings by about 115 per cent. Most of the increase in wage rates has been offset by a rise in the cost of living. The trends of manual workers' earnings, and of wage rates and retail prices from 1948 to 1958, compared with 1947, are shown in the diagram on p. 416.

The difference between men's and women's earnings in industry is due mainly to the fact that women are for the most part engaged on different tasks from men and are paid less than men on the grounds that these tasks are unskilled or semi-skilled. In the relatively few instances in the field of manual employment where men and women are employed on the same work, collective agreements frequently provide for equal remuneration.

There are no similarly detailed and comprehensive figures for the rates of pay and earnings of non-manual workers, as these are often based on individual contracts, except in the public service, teaching and retail distribution. The rather limited evidence suggests that the majority of male non-manual workers—the clerks and shop-assistants—have average earnings little different in range from those of manual workers, but the earnings of women in these occupations are somewhat higher than in manual occupations. The pay of shop-assistants is on scales prescribing weekly minima from about £6 15s. to £9 3s. for men and £4 16s. 6d. to £6 12s. 6d. for women. The Office Management Association makes periodical surveys of clerical salaries. The latest survey, of March 1958, which covers 968 establishments, employing 89,977 clerks, shows that the average weekly salaries for young inexperienced clerks ranged mainly from 71s. 4d. to 101s. 9d. for youths and from 61s. 6d. to 88s. 6d. for girls, while average salaries for adult male clerks ranged from £9 4s. 8d. for the lowest grade of skill and responsibility to £15 14s. 5d. for the highest. Corresponding women's salaries were 25 to 30 per cent less.

EARNINGS, WAGE RATES AND RETAIL PRICES

1947 = 100



The starting salaries in many professional and technical careers are often in the range of £400 to £650 a year, though they may be lower for trainees starting work in their teens and higher for some graduates entering industry and the Civil Service; such posts offer increments and opportunities for promotion, but it may be noted that, in 1954-55, when the average level of earnings was about 20 per cent lower than in 1958-59, only about 0.8 per cent of all employees were earning over £2,000 a year, only about 0.3 per cent over £3,000 and less than 0.1 per cent over £6,000. Additional information about the spread of incomes in different occupations is available from unofficial sources; for example, the national sample surveys of personal incomes and savings made in the spring of 1952 by H. F. Lydall and in the spring of 1954 by T. P. Hall. Table 28 is based on their surveys.

These surveys illustrate the extent of the overlap in the ranges of earnings of different kinds of occupation, even if the actual earnings are greatly below present levels.

Most of the senior posts in business, the professions and the Civil Service are in the range of £1,200 to £5,000 a year. The posts with salaries of £5,000 to £12,000 a year include those of Cabinet Ministers, chairmen and some other members of the boards of nationalised industries, judges of the High Court and Court of Appeal, and Lords of Appeal, the Permanent Secretaries of Government departments, the clerks of the largest municipal authorities, editors of daily newspapers, a few

TABLE 28

INCOME FROM EMPLOYMENT BY OCCUPATION (a)
percentage distributions

Employment income of income unit (b)	Analysis for 1952 by occupation of head of income unit						All income units in 1952	All income units in 1954
	Self- employed	Managers and technical	Clerical and sales	Skilled manual	Unskilled manual	Retired and unoccupied		
Nil	62	—	—	—	—	69	19.0	18.5
£1— £99	8	*	3	1	7	13	5.2	5.7
£100— £199	19	*	17	6	14	10	10.1	8.2
£200— £299	5	2	18	13	25	5	12.7	9.9
£300— £399	2	4	23	29	32	1	19.5	13.9
£400— £499	1	9	16	25	12	1	13.8	14.2
£500— £599	1	14	11	14	6	*	8.4	12.0
£600— £699	*	15	4	7	3	—	4.5	7.2
£700— £799	1	17	4	3	1	*	2.6	4.4
£800— £999	*	15	2	2	*	*	2.1	3.6
£1,000— £1,499	—	11	2	*	—	1	1.2	2.5
£1,500— £1,999	—	7	—	—	—	—	0.5	
£2,000 and over	*	6	—	—	—	—	0.4	
TOTALS ..	100	100	100	100	100	100	100	100
Number in sample ..	230	259	330	807	388	571	2,598 (c)	2,463
Average Income: Arithmetic mean (in £s) of those em- ployed ..	202	933	383	420	315	168	404	444
Standard devia- tion (in £s) ..	206	934	220	159	149	204	351	n.a.

(a) Employment income includes income from wages, salaries, pensions from employers, casual earnings of non-professional workers, bonuses, tips, etc.

(b) The income unit is defined as follows: (1) all single persons of 18 years of age or over, whether living alone or with other members of their family, are regarded as separate income units; if they have dependent children of their own (of under 18 years), as may happen in the case of widows and divorced and separated people, their children form part of their income unit; (2) married couples living together are assumed to pool their incomes and each couple is counted as a single unit, and their children of under 18 years are also included in their income unit.

(c) Includes 13 income units in which the occupation of the head was not discovered.

* = less than half of one per cent.

n.a. = not available.

persons outstanding in their professions and in the higher managerial posts in industry, commerce and banking. A few persons in business draw still higher salaries, while the earnings of star entertainers and some very successful people in other professions exceed £25,000 a year.

Women have the same right of entry as men to nearly all public offices, administrative posts and professions. They are paid the same salary for doing the same work in medicine, dentistry, physiotherapy, radiography, university teaching, journalism, broadcasting and architecture, and as Ministers of the Crown, members of Parliament, salaried magistrates and solicitors, pharmacists working in hospitals, and administrative, professional and technical workers in local government. Women in independent professions are not expected to charge lower fees than men. In most other occupations, however, a woman in Britain doing the same job as a man is at present paid less for doing it, although the position is changing. The Government has stated that it accepts the principle of equal pay, and steps are being taken to put it into effect by stages in the public services. In January 1955, the Chancellor of the Exchequer announced Government acceptance of a scheme for progressive increases in the salary scales of non-industrial women civil servants to make these identical with men's scales by 1961; in April 1955, the Minister of Education announced approval of similar proposals by the Burnham Committee (the advisory body concerned with teachers' salaries) for equal pay for women teachers; and in the same month it was decided that equal pay for all women in administrative departments of local authorities should also be introduced by stages. Since then similar proposals have been agreed for certain other salaried workers, including the staffs of the National Health Service and of the electricity and gas authorities and of the British Transport Commission. Women's salaries outside the public service are being similarly adjusted in some cases.

Hours of Work

While, as already stated, the hours of work of women and young persons between the ages of 16 and 18 in factories and in certain occupations are limited by law to 48 a week and those of young persons under 16 years to 44 a week, normal hours of work for all ages and both sexes are usually shorter. Agreed weekly hours are mainly from 42 to 46 hours, averaging between 44 and 45, and may be worked as either a five-day or a five-and-a-half-day week according to the industry and the rule of the particular establishment. Hours actually worked by men are somewhat longer owing to overtime working. The survey conducted by the Ministry of Labour and National Service in April 1959 into earnings and hours of manual workers showed that average weekly hours actually worked were as follows:

Men	..	..	..	..	..	..	..	48.0 hours
Youths and boys	..	..	..	..	..	..	..	44.6 hours
Women	..	..	..	..	..	..	..	41.5 hours
Girls	..	..	..	..	..	..	..	42.3 hours
All workers	..	..	..	..	..	..	..	46.3 hours

Holidays with Pay

With a few exceptions, manual workers (including shop assistants) in industries covered by agreements or statutory orders are entitled to paid holidays of twelve days or two weeks. Moreover, payment is made for bank or statutory public holidays, which are as follows: in addition to Good Friday and Christmas Day, there are Bank Holidays in England, Wales, and the Channel Islands on Easter Monday, Whit-Monday, the first Monday in August and the first weekday after Christmas

(Boxing Day), and in Scotland on New Year's Day, the first Monday in May, and the first Monday in August. Northern Ireland observes all the English holidays and, in addition, has a Bank Holiday on St. Patrick's Day, 17th March, and a statutory public holiday on 12th July (commemorating the Battle of the Boyne, 1690); Easter Tuesday is also a customary holiday for industry and trade. Many agreements provide that payment should also be made for specially proclaimed holidays.

Safety

Safety depends in practice at least as much on the education and voluntary efforts of the employers and of the workers as upon safety regulations. There are over a quarter of a million workplaces in Great Britain subject to the Factories Acts. The total strength of the Factory Inspectorate including medical and other specialists was 411 in June 1959 and its authorised strength is 450. In June 1959 there were 1,596 mines (including 768 main coal mines) and 4,668 quarries, including 303 opencast coal sites; the total strength of the mines and quarries inspectorate was 151. Except in coal mines, prevention of accidents by frequent inspection is impracticable.

The concern of both trade unions and employers' associations with safety helps to maintain safety standards, and the requirements about accident notification (see p. 412) help inspectors to examine the means of prevention with employers, machinery manufacturers and interested organisations. But the voluntary co-operation of managements and employees in individual workplaces is essential to the safety drive. The Accident Prevention Movement, a voluntary educational campaign, is strongly supported by the Factory and the Mines and Quarries Inspectorates. Inspectors inquire into safety aspects of machine design and specification, circulate expert advice by personal exhortation, lectures and literature, and encourage the appointment of safety officers and the formation of works safety committees.

Most large and many small firms have such committees and, in many areas, firms have organised safety groups, whose members meet monthly for the exchange of information, discussion, lectures and films on safety measures.

Training for safety is an important facet of the safety drive and, to help in this work, the Ministry of Labour and National Service has recently incorporated a safety course in the Training Within Industry for Supervisors (TWI) scheme (see p. 400). An industrial health and safety centre in London is also maintained by the Ministry of Labour and National Service. The industrial safety training centre in Birmingham is run by the Birmingham and District Industrial Safety Group, and training centres for building and civil engineering foremen have recently been set up, with the assistance of the Ministry of Labour and National Service, by the London Building and Engineering Contractors' Accident Prevention Group and by the Merseyside Area Industrial Accident Prevention Group. The Royal Society for the Prevention of Accidents helps the Accident Prevention Movement by providing publicity and by organising conferences and courses for safety officers.

Organisations in industry are now concerning themselves to an increasing extent with the promotion of safety at work and the provision of information and advisory services to their members. They participate also in joint standing and advisory committees established by the Chief Inspector of Factories. Representatives of the Trades Union Congress, the British Employers' Confederation, the nationalised industries and the Ministry of Labour and National Service meet on the Industrial Safety Sub-Committee of the National Joint Advisory Council. The Minister of Labour and National Service has established a joint advisory committee, representative of employers and workers in the building and civil engineering industries, to examine the problems associated with safety and health in these industries.

Both transport operators and the Ministry of Transport and Civil Aviation give high priority to safety measures affecting crews and passengers. Every endeavour is made to counter the higher risks resulting from rising traffic densities, by improvement in the design of vehicles, transport plant and equipment, by traffic regulation and control of standards of maintenance and by the training of crews in competency and safety awareness. The detailed regulations and instructions issued by the ministry and its agents form the basis of elaborate safety procedures laid down by the operators themselves and by the makers of vehicles, equipment and works. The radio industry and the transport services co-operate in the development and application of radar systems and other safety devices (see pp. 385-6).

Fatal and serious industrial accidents have tended to diminish during the twentieth century. They rose somewhat in factories during the early years of the second world war. Since then, however, there has been a further decline, and Britain's fatal industrial accident rate (per thousand man-years) is among the lowest in the world. Accidents sufficiently serious to cause more than three days' absence still happen, however, to 2.5 per cent of male factory employees every year and about 1 per cent of female factory employees. Most of these accidents are due to quite ordinary causes—the handling of goods, the use of hand-tools, or falls—and only a sixth are caused by power-driven machinery. Fatal accidents reported in 1958 in factories and other places of employment subject to the Factories Acts numbered 665. Fatal accidents in mines and quarries numbered 388. The total of fatal industrial accidents in factories, mines and quarries and railways, and in trading and fishing vessels numbered 1,382.

Health and Welfare

Employers frequently achieve health and welfare standards considerably higher than those prescribed by law. They are helped to do this by the inspectorates, by Government departments and agencies, by employers' associations and trade unions and by expert voluntary bodies.

An increasing number of firms in Britain provide a whole-time or part-time doctor, an industrial nurse, and a canteen with hot meals, pay part or all of the cost of clubs and sports grounds, operate retirement and sickness insurance schemes supplementing the State insurance schemes, and afford training and educational facilities. Some have their own rehabilitation centres or support convalescent homes.

Periodic medical examinations are compulsory in factories for all young workers under 18 years of age and for adults in certain dangerous occupations where such examinations are of preventive value. These are carried out by some 2,200 Appointed Factory Doctors, most of whom are engaged on a part-time basis. In addition, a number of employers maintain medical services for their employees, and it is estimated that there are altogether about 1,500 doctors, including about 400 full-time doctors and several thousand nurses and assistant nurses, in the industrial health services. Increasing numbers of doctors and nurses are taking up this work, which aims to provide occupational health facilities of a specialised preventive character which do not duplicate the personal services already provided by the National Health Service.

The big employers, including the State and the boards of nationalised industries, have naturally taken the lead in this expansion, and a number of smaller factories are also covered, either because of special risks or because of their progressive outlook. There are, however, difficult problems to be solved in connection with the further development of industrial health services, and in 1955 the Minister of Labour and National Service appointed a Standing Industrial Health Advisory Committee, of which he is the chairman, to advise him on this subject. The

membership of this committee includes persons nominated by the British Employers' Confederation, the Trades Union Congress, the nationalised industries, the Medical Research Council, the British Medical Association, the Royal College of Nursing and other organisations and bodies closely concerned with the promotion of industrial health. This committee has given considerable attention to the need for further work to determine more precisely the situation concerning industrial health services. With its advice two pilot surveys have been undertaken, one of a particular locality and one of a particular industry, for the purpose of obtaining detailed factual information on the situation. In the light of these and other investigations the committee is examining the best ways of developing industrial health services in factories.

Prompt and effective action in the field of industrial health depends, among other things, on adequate and properly co-ordinated arrangements for investigation and research. Field investigations are carried out by the Factory Inspectorate, which has specialised medical and technical branches. Research facilities are provided by Government agencies such as the Medical Research Council and the Department of Scientific and Industrial Research; by the faculties of industrial health and social medicine of the universities; and by the research departments of various industries and large industrial concerns. Co-ordination is provided by a number of general and special committees.

Welfare standards vary considerably from one factory to another. The amenities provided by large factories depend partly on the employees' needs and desires. The requirements of a factory where the work is light, and many employees are women or young persons, are different from those of an iron foundry or steelworks, where much of the work is arduous, and is undertaken by men.

Progressive firms are careful to find out what their employees want, and welfare policy is often decided in consultation with the workers, whether through regular consultative machinery or by other means.

During and since the second world war, the provision of meals for workers at their place of work has become usual in large undertakings and quite common in smaller ones. It is estimated that over 19,000 industrial premises have canteen facilities for their workers. There are also colliery canteens providing meals for about 98 per cent of coalminers. Any surplus earned by canteens is used to improve the canteen or to finance some other welfare services, while any losses are borne by the firms.

HUMAN RELATIONS IN INDUSTRY

The establishment of good working conditions is assisted by the organisation of employers and workpeople, by arrangements for negotiation and settlement of differences, and by protective legislation and its enforcement. This institutional framework, however, cannot by itself create satisfaction with work and working conditions, nor the mutual trust and co-operation of management and workers, nor that sense of shared effort and achievement which is known as 'team spirit'. Nor will good wages and hours, high standards of safety and health and lavish employee services necessarily bring about these attitudes and responses; their achievement depends rather on the building up of good relations between individuals and between interacting groups within the organisation.

In recent years, therefore, there has been a marked increase of interest in 'human relations' in industry, i.e. relations between management and their workers as individuals, as distinct from relations between organisations of employers and organisations of workers. This has led to more widespread attention being given

to all aspects of personnel management and to the establishment of more personnel departments.

Practically all large industrial firms and many small ones now have a personnel department staffed by one or more specialist officers. While the form of organisation of personnel departments varies, the personnel officer is generally responsible for advising all levels of management on every aspect of labour relations. This officer also has particular duties with regard to recruitment, selection, education and training, transfer of labour, the application of wage agreements, the promotion of joint consultation and the supervision of working conditions and employee services.

Both voluntary and official organisations have been concerned with the promotion of better human relationships in industry. The voluntary organisations include bodies which deal with management problems and provide a service to subscribing firms, professional associations linking individuals who have a common interest in particular functions of management and administration, and bodies which provide specialist services, usually on a fee-paying basis.

In 1945, the Ministry of Labour and National Service established a Personnel Management Advisory Service which has done much to promote good personnel management and to assist firms by discussing problems of personnel policy. The service is staffed by a team of experienced personnel officers recruited from industry.

Recruitment and promotion policies are matters which each undertaking decides for itself, although in some industries the decisions may be limited by collective agreements or by trade practices. Great importance has recently been attached to selection; and courses for training personnel officers in modern interviewing techniques, including the use of test procedures, are now well attended. Selection of applicants for jobs is assisted by the Government Employment Services (see pp. 398-403).

Since the end of the second world war, there has been an intensification of the educational and training activities arranged by industry. Short-term training is almost entirely the responsibility of individual firms, but in over 110 sections of industry and commerce, employers and trade unions have agreed national or regional schemes of apprenticeship and other long-term training. Further expansion and improvement of training facilities have been urged in the report of a sub-committee of the National Joint Advisory Council. This report, published in February 1958 under the title *Training for Skill*, stressed that the increase in the number of young people leaving school in the next few years afforded a great opportunity to increase the supply of skilled workers and technicians, and proposed that a council should be formed by industry to follow up its various recommendations. This led to the establishment, in July 1958, of the Industrial Training Council, composed of representatives of the British Employers' Confederation, the Trades Union Congress and the nationalised industries. The Government has announced its intention to make a grant of up to £75,000 to the council to further the appointment of training development officers, provided that industry contributes at least an equivalent amount.

The realisation that the co-operation of workpeople depends largely on their proper understanding of management's aims and plans has focused attention on the means of conveying information to workers. Methods used include posters, wall information sheets, production charts, displays of photographs, the production of news-sheets and house journals, discussions and lectures, film shows and exhibitions. It is increasingly held, however, that, although these media have their use, it is more important to improve communications down the normal chain of responsibility to workshop level (a matter which depends on personal relations and

on the adequacy of supervisor training) and to establish means for joint consultation, such as those provided by a works council.

The range of subjects which works councils can fruitfully discuss is wide and includes hours of work (within the framework of agreements), safety, health, efficiency of production, absenteeism, labour turnover, training, education, recreation and employees' services generally. Works councils are usually kept informed about the state of trade and production and the firm's prospects, and frequently consider problems resulting from decisions to change production methods. It is the general practice, however, to exclude all questions relating to wages and conditions of employment, and other matters covered by negotiation between organisations of employers and workers.

The Government has assisted these developments by advice on techniques, by the supply of posters, pamphlets, films and other publicity material, and by encouraging and promoting joint consultation. Personnel management advisers of the Ministry of Labour and National Service are often approached by firms seeking advice on the establishment of works councils or on ways in which their activities can be made more effective.

The Government has sought to extend by research the available knowledge of the factors influencing human relations in industry and human efficiency. Research units of the Medical Research Council have worked on these problems for many years. In 1948, the Advisory Council on Scientific Policy set up a committee on industrial productivity, one of whose panels was concerned with human relations; this panel was responsible for two major research projects on the problems of joint consultation.

In March 1953, the Department of Scientific and Industrial Research and the Medical Research Council set up two committees concerned with research on the human factor in industry, the Committee on Human Relations in Industry and the Committee on Individual Efficiency in Industry. Finance for the research projects approved by these committees was derived partly from the Exchequer and partly from the counterpart funds of United States Conditional Aid to the United Kingdom.

The Committee on Human Relations approved a number of projects for research into such questions as factors influencing the effectiveness of incentive payment schemes, factors facilitating and restricting the introduction of new techniques and methods in industry, characteristics of management organisation affecting productivity, industrial education, training and promotion, and the problems of the effective employment in industry of special groups such as older persons and married women.

The Committee on Individual Efficiency concerned itself with research into such matters as the influence of equipment design and working tools on operator efficiency, factors affecting the efficient utilisation of industrial engineering techniques, and training methods in industry.

The results of this work are now appearing. The Committees have been disbanded, but the Department of Scientific and Industrial Research has appointed a new Committee on Human Sciences, while units of the Medical Research Council are continuing research into cognate problems.

XII. FINANCE

PUBLIC FINANCE

Public finance is concerned with the way public authorities (i.e. the central Government and local authorities) finance their activities—how their expenditure is decided upon and how their revenue is obtained.

Money administered by public authorities¹ can be roughly divided into two categories:

1. The funds of the central Government, raised mainly by taxation, but also in part by borrowing, and paid into and out of the Exchequer² in accordance with the proposals of the Government, as approved by Parliament (principally the House of Commons).

There are also funds administered for special purposes by central Government departments and wholly or partially maintained by receipts which do not come from the Exchequer. The only important one is the National Insurance Fund, administered by the Minister of Pensions and National Insurance, used for the payment of benefits under the National Insurance Scheme.

2. The funds of local authorities, obtained partly from rates (local taxes on dwelling houses and other real estate) and income from property and trading receipts, partly from grants and loans from the Exchequer, and partly from loans raised in the open market.

The following broad account of Government finance will be concerned mainly with the Exchequer and only incidentally with local government³ and other public funds.

Financial control, as exercised by the House of Commons, is based on law, parliamentary rights and custom.

As the power of Parliament grew in late medieval and Tudor times, the principle that taxation by the Crown required parliamentary consent was gradually evolved. The principle was established, at the end of the constitutional struggles of the Stuart period, by the Bill of Rights, 1689.

In medieval, Tudor and Stuart times, it is broadly true to say that once the King was granted the right to raise a given sum by taxation, he was free to spend it as he chose. In the eighteenth and nineteenth centuries, the House of Commons gradually developed the modern system of controlling expenditure through the device of Appropriation, which was embodied in the Exchequer and Audit Departments Act, 1866.

From the very early days of Parliament it had been established that such financial control as Parliament possessed should be exercised by the House of Commons. This control became effective, as regards taxation, in the seventeenth century, but as regards expenditure it was not effective until the nineteenth century. The con-

¹ For an account of public finance in Northern Ireland and its relationship to that of the United Kingdom, see pp. 434-5.

² The term 'Exchequer' took its name from the 'chess-board', or table with chequered cloth, round which the King's financial officials sat for accounting purposes in the twelfth century.

³ For further information on local government finance, see pp. 75-77.

trolling power of the House of Commons is acknowledged today in the Speech from the Throne at the opening of a new session of Parliament, which is addressed to both Houses but contains a special paragraph addressed to the Commons alone.

The Commons have traditionally claimed that the Lords have no power to modify financial provisions, though they may reject such provisions; thus, to minimise the chance of rejection, the practice was started in 1861 of embodying the main financial provisions for the ensuing year in a single Bill. Since the passing of the Parliament Act, 1911, however, the assent of the House of Lords is no longer needed for a Bill certified by the Speaker to be a Money Bill (see pp. 36 and 37-8).

Today, the authority of the House of Commons has to be obtained for all expenditure by the central Government itself and for the raising of revenue by taxation or borrowing. All Government revenue is paid into the Government account with the Bank of England—known as the Exchequer Account or the Consolidated Fund. With certain exceptions (the main one, as previously stated, being National Insurance benefits), all payments by the Government come out of this account.

The following sections outline the machinery by which expenditure and revenue are authorised and controlled, the purposes on which public money is spent and the sources from which revenue is obtained.

ESTIMATES AND EXPENDITURE

Classification of Expenditure

Central Government expenditure falls into two main groups:

1. Expenditure which is specifically authorised by Act of Parliament without limitation to any particular year. This expenditure includes the interest, sinking funds and cost of management of the National Debt, the financial provision made for members of the royal family, and salaries and pensions of judges and certain high officers whose independence of the Government is thought to be better guaranteed by permanent grant than by annual vote. These Consolidated Fund Services represent a permanent charge on the Consolidated Fund.
2. All other Government expenditure, which is authorised from year to year and which includes all expenditure on defence, on the social services and on the general administration of the country. These are called Supply Services because the House of Commons, when voting money, is granting to the Crown 'such aids or supplies as are required to satisfy . . . the pecuniary necessities of the Government'. It should be noted that some of this expenditure may also depend on legislation, such as the National Health Service Acts, which relates to a specific object of expenditure.

Authorisation of Expenditure

The Estimates for these Supply Services are considered by the House of Commons in Committee of Supply (that is, in Committee of the whole House with the Chairman of Committees, instead of the Speaker, in the Chair). The committee usually discusses public policy relevant to the Estimates, though any Estimate could be examined in detail if members wished and if time allowed (see also p. 39).

Estimates for Supply Services in the financial year beginning on 1st April are submitted to the Treasury by each department in the preceding November and December. Estimated expenditure is grouped under main headings called 'Votes' which are further broken down into subheads and items. If the House of Commons approves the Estimates, the sums asked for are voted and later confirmed in the

Appropriation Act; this Act appropriates the money to specific Votes. Inside each Vote, a 'virement', the spending of money on one subhead instead of on another, is permissible so far as Parliament is concerned, but only with Treasury consent. Departments are free to distribute expenditure within subheads as they please subject to Treasury approval of the type of expenditure involved.

An excess of expenditure, or a new service not covered by the Vote, or a virement of a magnitude or character which the Treasury considers should be brought to the attention of Parliament, requires a Supplementary Estimate. The Treasury exercises the same power of scrutiny over this as over the ordinary Estimates.

Scrutiny of Expenditure

Control of expenditure is maintained by the Treasury, by the Comptroller and Auditor General, by the Public Accounts Committee of the House of Commons and by the Select Committee on Estimates.

The Treasury

The power of the Treasury to control expenditure derives from the responsibility of the Chancellor of the Exchequer for the financial policy of the Government.

A central function of the Treasury is to present the Civil Estimates to the House of Commons. In considering the Estimates submitted by departments, the Treasury has to weigh the advantages of administrative proposals against the monetary and economic cost, taking into account current Government policy, to decide the relative merits of expenditure proposed by different departments and to eliminate any overlapping, uneconomic or wasteful expenditure where this has escaped the net of departmental financial control. Quite apart from the scrutiny of Estimates, throughout the year the Treasury keeps a close control over such matters as rates of pay and the aggregate size of the staff in all Government departments, in addition to exercising a general supervision over all departmental expenditure. The Treasury also lays down general rules of financial and accounting procedure for departments and prescribes the principles on which departmental contracts shall be made and the limits within which losses may be written off.

The Comptroller and Auditor General

Control over issues of money to departments and the audit of accounts is exercised by the Comptroller and Auditor General, who holds a permanent appointment as an officer of Parliament. Since 1866 he has had two functions: as Comptroller of the Exchequer he controls entries and issues of public money to and from the Exchequer Account; and as Auditor General he audits departmental accounts and submits the Appropriation Accounts to Parliament. His statutory function is to ensure that all expenditure is properly incurred, e.g., that no payments are made which go beyond any relevant statutory authority, and that Treasury sanction has been obtained wherever necessary. In addition, however, he has been encouraged by successive Committees on Public Accounts (see the next paragraph) to examine departmental expenditure with a view to drawing attention to any cases of apparent waste or extravagance.

The Public Accounts Committee

The accounts of each department and the reports on the accounts made by the Comptroller and Auditor General are considered by a select committee called the Public Accounts Committee (PAC). This was set up in 1861, by Mr. Gladstone, for the purpose of ensuring that expenditure was properly incurred in accordance with the way it was voted and with any relevant Acts of Parliament. These terms of

reference have been widely interpreted by the committee, which investigates whether full value has been obtained for the sums spent by departments and examines cases in which the administration appears to have been faulty or negligent. The committee has therefore become a powerful instrument for the exposure of waste and inefficiency. It embodies its findings in reports which may be discussed in the House of Commons. Its recommendations are considered by the Treasury in consultation with departments and put into effect, so far as they are accepted, according to Treasury instructions. If the recommendations are not acceptable, a reasoned reply has to be submitted to the committee, which may either accept the objections or return to the charge in subsequent reports.

Select Committee on Estimates

This committee was originally set up in 1912 but was re-formed in 1929 with wider terms of reference. Under these terms it has been reappointed annually except during the war years. The committee's functions are to examine the Estimates, to suggest the form in which they should be presented, and to report whether there are any economies which could be made without altering the policy implied in the Estimates. It is customary for the committee to select each year a few aspects of Government-voted services for review. In practice, the Estimates for the current year are not affected, but the committee's recommendations may reinforce Treasury control and influence the nature of expenditure in succeeding years.

THE BUDGET

'Budget' is an old word meaning a bag containing papers or accounts. The use of the word in public finance originated in the expression 'The Chancellor of the Exchequer opened his Budget', which was applied in Parliament to the annual speech of the Chancellor of the Exchequer explaining his proposals for balancing revenue and expenditure.

The Budget speech is the main occasion of the year for reviewing the financial state of the nation, and its formal basis is the Chancellor's proposals for raising money by taxation. By the time the Budget is introduced (usually in April) the Estimates of expenditure under various headings will have been presented to Parliament and published, and the expected total of Government expenditure for the year will be known. The Chancellor estimates the yield of the revenue on the basis of existing taxation and proposes such changes in taxation as will provide whatever surplus or deficit he considers desirable on economic grounds. These proposals are later embodied in detail in a Finance Bill. The gap between the Budget Statement and the Royal Assent to the Finance Bill (usually given in July) is covered by the Provisional Collection of Taxes Act, 1913, whereby changes in income tax and customs and excise duties¹ have immediate statutory effect if adopted by Resolution of the House of Commons.

The Budget speech also gives figures relating to certain payments of a capital nature for which the Government has statutory power to borrow and which are therefore excluded from the Budget expenditure met from revenue. These items and others are set out in the part of the Budget which lies 'below the line'.²

¹ In 1957, the Act was extended to include purchase tax.

² Items 'below the line' are: (1) receipts applicable by statute to debt interest which would otherwise be paid out of revenue; (2) receipts applicable to debt redemption; and (3) payments for which the Treasury has power to borrow.

Budget Policy

The original purpose of the Budget was purely financial—to provide money for Government expenditure. From an early stage, however, it was appreciated that taxation would affect the distribution of income and property and the level of expenditure on particular goods and services. At a later period it was realised that taxation also affected the nation's total expenditure and therefore the general level of economic activity. Since the second world war, Budgets have been consciously designed in greater or lesser degree to bring the total demand for goods and services into balance with the supplies which could be made available.

Direct taxation on income and property affects the distribution of wealth because the rates vary according to the size of income and property, the proportion of a high income taken in tax being much greater than the proportion of a small one; at the same time, the services provided by the Government (whether in cash or kind) are generally available to all, irrespective of wealth, but in some cases they are specially designed to benefit people with lower incomes. Indirect, or outlay taxes (see p. 431) do not affect the distribution of income; their main purpose has always been the raising of revenue, but by discouraging or encouraging consumption of particular goods they can be used to influence the allocation of resources and the pattern of trade.

The Budget affects the general level of expenditure and, therefore, the total demand for goods and services, in the following way: if there is an increase in Government expenditure without an increase in taxation then total demand for goods and services will tend to rise; the same thing will happen if there is a decrease in taxation without a decrease in Government spending. In this way the Budget can be used to counter unemployment. On the other hand, if there is an increase in taxation without an increase in Government expenditure or a decrease in Government expenditure without a decrease in taxation then the total demand for goods and services will tend to fall. In this way the Budget can be used to counter inflation.

For some years after the war, budgetary policy was mainly designed to avoid inflation by holding down consumer demand for goods and services so that it would not hamper exports, investment or the defence programme. The Budgets of 1951 and 1952 aimed also to hold down investment in the interests again of exports and defence. By 1953, as total demand had fallen while productive capacity had increased, some unused resources became available; in consequence, there was a reduction of taxation in the 1953 Budget, which aimed particularly at encouraging higher investment and production. These aims were continued in the 1954 Budget, when, however, changes in taxation were much smaller than in 1953. The Budget of April 1955, which gave further tax reliefs, was followed in October by a Supplementary Budget which had the purpose of reinforcing measures, including a tighter credit policy, instituted earlier in the year with the object of curtailing excessive internal demand and of strengthening the balance of payments position. The 1956 Budget was designed to continue the drive against over-spending and to provide new inducements to savers. During 1956 and 1957, as a result of budgetary and other measures, inflationary pressure was reduced and the balance of payments improved; consequently, in the 1957 Budget, it was possible to make some reductions in taxation. The 1958 Budget, which included some further taxation concessions—mainly in purchase tax and profits tax—was intended to consolidate the country's improved economic position and to prepare for future expansion. The aim of the Budget of April 1959, which provided for important reductions in taxation and an increased rate of repayment of post-war credits, was to give a further stimulus to economic activity and to encourage the utilisation of spare industrial capacity while ensuring that price stability was maintained.

Sources of Revenue

Money to meet 'Ordinary' (mainly current) Budget expenditure of the central Government is in normal years derived from taxation. Taxes can be divided into two groups, direct and indirect, which correspond roughly to the duties collected by the Board of Inland Revenue and by the Customs and Excise Department. The most important inland revenue duties—income tax (including surtax), profits tax and estate duty (death duty)—are levied directly on the income or property of those who, in general, have to bear them. Income tax on individual (though not on corporate) incomes and estate duty are progressive taxes, that is, larger incomes and estates bear a proportionately higher rate of tax. Stamp duties, although not a direct tax, are also collected by the Board of Inland Revenue. Taxes on motor vehicles are collected by the principal local taxation authorities, which are the county or county borough councils in England and Wales and the corresponding councils in Scotland; the proceeds are paid by the local authorities to the Exchequer.

Income Tax, Surtax, and Profits Tax

Income tax is imposed at a standard rate for the year of assessment beginning on 6th April. The standard rate, for the year 1959-60, is 7s. 9d. in the £ (38.75 per cent). The tax imposed on an individual is graduated by means of personal allowances and reliefs, by reduced rates of tax on the first sections of taxable income,¹ and by the surtax.² In the case of a married couple the incomes of husband and wife are aggregated and are treated as one income, but a higher personal allowance is given than for a single person.

Examples of the amounts of income tax paid yearly by people with different incomes and family responsibilities are shown in Table 29.

Most wages and salary earners pay their income tax under a PAYE ('Pay-as-you-earn') scheme, under which tax is deducted at source, thus enabling them to keep up to date in tax payments.

Companies are liable at the standard rate of tax on their total income irrespective of its amount; they are also subject to profits tax, which, as from 1st April, 1958, has been levied at the rate of 10 per cent.

In general, income tax is charged on all income which originates in the United Kingdom and on all income arising abroad of persons (including companies) resident in the United Kingdom. The main exceptions are that interest on certain United Kingdom Government securities belonging to persons not ordinarily resident in the United Kingdom is exempt; income from certain classes of possessions abroad is chargeable not on the amount of income arising but on the amount of income remitted to the United Kingdom; and the trading income of specified overseas trade corporations³ is not charged so long as it remains undistributed.

¹ The balance of income remaining after deduction of the personal allowances and reliefs is taxable income. The first three sections of taxable income are charged at reduced rates of income tax, and only the remainder is charged at the standard rate. For 1959-60 the reduced rates are: 1s. 9d. in the £ on the first £60; 4s. 3d. in the £ on the next £150; and 6s. 3d. in the £ on the following £150.

² The surtax, which is essentially an income tax at higher rates, is charged on personal incomes exceeding £2,000 a year after deducting certain personal allowances in excess of the single person's basic allowance. It is imposed at rates which increase progressively until (for 1959-60) on all income above £15,000 a year, income tax and surtax combined amount to 17s. 9d. in the £.

³ Broadly speaking, these are companies which, though managed and controlled in the United Kingdom, carry on all their trading activities overseas.

The United Kingdom has entered into agreements with many countries providing for relief from double taxation; where such agreements are not in force, the United Kingdom allows unilateral relief.¹

Estate Duty

Estate duty is chargeable on the value of property (whether legally settled or not) which passes or is deemed to pass at death. Thus, it is not limited to property owned by the deceased. It may, for example, extend to trust funds to the income of which the deceased was entitled during his lifetime, and to gifts made by the deceased within five years of his death (one year in the case of a gift for public or charitable purposes). Estates with a net capital value of £3,000 or less are exempt from duty, but on estates of a higher value there is a progressive duty ranging from 1 per cent to 80 per cent.

TABLE 29
INCOME TAX AND SURTAX PAID BY PERSONS WITH DIFFERENT INCOMES
AND FAMILY RESPONSIBILITIES IN 1959-60

(to nearest £)

Income before tax	Single persons		Married couples without children		Married couples with two children		
	Income all earned income	Income all invest- ment income(a)	Income all earned income	Income all invest- ment income(a)	Earned Income		
					Two children not over 11	Two children over 11 but not over 16	Two children over 16
200	1(b)	1(b)	—	—	—	—	—
300	12	12	—	—	—	—	—
400	29	52	8(b)	27(b)	—	—	—
500	49	84	24	53	—	—	—
600	74	123	42	84	2	—	—
700	101	162	67	123	15	5	—
800	131	200	93	162	31	21	10
900	162	239	123	200	53	37	27
1,000	192	278	153	239	77	61	46
2,000	493	665	454	627	377	357	338
5,000	1,953	2,340	1,891	2,279	1,769	1,738	1,708
10,000	5,352	5,953	5,276	5,877	5,123	5,085	5,047

Source: *Financial Statement*, 1959-60.

(a) *Age Relief*. Where the taxpayer (or his wife) is 65 or over and his total income does not exceed £800, age relief is given; this reduces the tax payable to that chargeable on the earned income scale. Where the total income exceeds £800, marginal relief is given so that the full tax on the investment income scale is not payable until marginal relief runs out.

(b) A single person aged 65 or over is exempt from tax if his total income does not exceed £275; a married couple is exempt if either of them is aged 65 or over and their joint income does not exceed £440. There is marginal relief where the income slightly exceeds these limits.

¹ The information in this paragraph is not legally authoritative. For this purpose reference should be made to the relevant Statutory Instruments. Inquiries in the United Kingdom should be addressed to the Secretary, Board of Inland Revenue, Somerset House, London, W.C.2.

Indirect Taxes

Most indirect or outlay taxes are customs and excise duties and are levied on commodities or services. They are called indirect because the importer, manufacturer, wholesaler, or provider of commodities or services pays them first and then adjusts his prices to his customers accordingly.

Customs duties are levied on imported goods, and excise duties on goods produced, and services provided, at home. The purchase tax, which is also collected by the Customs and Excise Department, applies equally, and at the same rate, to home-produced and to imported goods.

The system of customs duties is twofold in its purpose: it has the function of providing a measure of protection for British industries or preference for products imported from Commonwealth countries overseas and it has also the function, in association with the excise system, of providing revenue.

The principal revenue duties collected by the Customs and Excise Department are those on tobacco, alcoholic drinks and hydrocarbon oil (mostly petrol and diesel fuel for road vehicles). There are a number of smaller revenue duties, e.g., on betting, on cinemas (entertainments tax), and on television, matches and sugar. The protective customs duties cover a wider field, but their contribution to the yield of indirect taxation is relatively small.

Purchase tax is charged on a wide range of goods, nearly all of them consumer goods, at rates varying from 5 per cent to 50 per cent of the wholesale value. Articles subject to revenue duties of the Customs and Excise Department are in general exempt from this tax; other goods free of purchase tax include food, fuel, books and newspapers, young children's clothing and footwear, certain non-proprietary drugs and medicines, some household appliances and textiles.

THE EXCHEQUER ACCOUNTS, 1959-60

In the Budget of April 1959, total current expenditure for the financial year ending 31st March, 1960, was estimated to reach £5,223 million, while the estimate for total current revenue (after allowing for taxation changes) was £5,325 million, making a surplus of £102 million. These figures exclude self-balancing revenue and expenditure (Post Office trading), for which the estimate was £379 million. 'Below the line' total payments were estimated at £1,205 million, while total receipts were estimated at £382 million, leaving a deficit, to be borrowed or met from the surplus on current account, of £823 million.

Table 30 shows the Budget estimates for 1959-60 in comparison with the out-turn (Exchequer receipts and issues) for the previous year. The diagram on p. 433 illustrates the pattern of Government estimates of revenue and expenditure on current account in 1959-60.

CAPITAL PAYMENTS AND RECEIPTS

In the last few years the main items of capital expenditure dealt with in the part of the Budget statement which lies 'below the line' have been loans to local authorities for housing and other investment; funds to meet capital expenditure by the Post Office; war damage payments; working capital for the National Coal Board; and loans to other nationalised industries. Capital receipts have come mainly from the repayment of these loans. If, on balance, there is a deficit, it is met from the proceeds of Government borrowing or from the surplus, if any, in 'Ordinary' revenue and expenditure, i.e. 'above the line'; while if there is a surplus it goes to reduce the National Debt.

TABLE 30

UNITED KINGDOM BUDGET: 1958-59 OUT-TURN AND 1959-60 ESTIMATES
(after 1959-60 Budget changes)

£ million

Above the Line					
Revenue	1958-59 Out- turn	1959-60 Esti- mate	Expenditure	1958-59 Out- turn	1959-60 Esti- mate
Inland Revenue ..	3,016	2,856	Interest on Debt ..	663	600
Customs and Excise ..	2,191	2,150	Sinking Funds ..	38	39
Motor duties ..	107	104	Northern Ireland ..	77	79
			Miscellaneous ..	8	10
Total Tax Revenue ..	5,314	5,110	Total Consolidated Fund Services ..	786	728
Broadcast licences ..	34	35	Supply: Defence (a)	1,468	1,502
Sundry loans ..	27	30	Civil (includ- ing cost of tax collection)	2,849	2,993
Miscellaneous ..	105	150	Total Supply ..	4,317	4,495
Total Revenue ..	5,480	5,325	Total Expenditure ..	5,103	5,223
			Surplus	377	102
	5,480	5,325		5,480	5,325
Below the Line					
Receipts			Payments		
Interest outside Budget	206	240	Interest outside Budget	206	240
Housing receipts from Votes	7	8	Post-war Credits ..	18	89
Repayments of past loans:			War damage	18	18
Local authorities ..	52	55	Loans to:		
Post Office	10	10	New towns	28	31
Nationalised indus- tries	29	47	Building societies ..	—	25
Other repayments ..	22	22	Post Office	43	41
			Export Credits Guar- antee Department	22	50
			Colonial Develop- ment Corporation	6	10
			Colonial Govern- ments	—	20
			Nationalised indus- tries	440	580
			Transport (railway finances)	94	88
			Other items	10	13
Total Receipts ..	326	382	Total Payments ..	885	1,205
Net sum borrowed or met from surplus above the line ..	559	823			
	885	1,205		885	1,205
TOTAL RECEIPTS ..	5,806	5,707	TOTAL PAYMENTS ..	5,988	6,428

Source: *Financial Statement*, 1959-60.

(a) Not including receipts from Germany to cover local costs of British forces (£12 million) and defence expenditure by civil departments (£18.85 million in 1958-59 and £18.48 million in 1959-60).

THE UNITED KINGDOM BUDGET 1959-60

(based on April 1959 Budget estimates)

REVENUE

Receipts per £ from different sources

TAXES ON INCOME AND CAPITAL 10s. 6d.

Taxes on Personal Incomes

Income Tax and Surtax, including tax on dividends and interest (£1,693 million)

64

Tax Paid by Companies

Income Tax, Profits Tax, etc. (£900 million)

35

Death Duties (£195 million)

9d

TAXES ON SPENDING 8s. 8d.

Tobacco (£750 million)

210

Alcohol (£376 million)

15

Entertainments, Television and Betting (£54 million)

2d

Purchase Tax (£471 million)

19

Oil and Motor Duties

Oil, including petrol (£355 million)
Motor (£104 million)

19

Other

Stamp Duties, Import Duties (except on Alcohol, Tobacco, Oil), etc. (£212 million)

9d

NON-TAX REVENUE 10d.

Miscellaneous, including receipts from Government trading and servicing of certain loans and broadcast licences (£215 million)

10d

EXPENDITURE

Outlay per £ on different items

SURPLUS 5d.

5d

Surplus (£102 million)
helps to finance
capital expenditure

NATIONAL DEBT 2s. 5d.

25

National Debt

Interest on Government stocks,
including National Savings Certificates
(£639 million)

DEFENCE 5s. 8d.

58

Defence (£1,514 million)

SOCIAL SERVICES, SUBSIDIES, ETC. 8s. 2d.

21

Health (£560 million)
excluding grants to local authorities

21

Personal Payments

Family Allowances, War Pensions, National Assistance, Government Contribution to Insurance Funds (£543 million)
Excludes benefits and pensions paid out of National Insurance Funds

11d

Agricultural Support
Subsidies (£245 million)

32

Assistance to Local Services

School Education, Housing, Health, Police, Classified Roads, etc. (£890 million)

OTHER SERVICES 3s. 4d.

34

Miscellaneous, including Atomic Energy, Commonwealth and Foreign, Universities, Tax Collection, Trunk Roads, Broadcasting (£882 million)

TOTAL £5,325 million £1. 0. 0.

£1. 0. 0. TOTAL (including surplus)
£5,325 million

Since the war, new lending by the Government has exceeded loan repayments as, in the main, repayments are spread over a long term. Between August 1945 and December 1952, local authorities were obliged, under the provisions of the Local Authorities Loans Act, 1945, to rely upon the Exchequer, operating through the Public Works Loan Board (see p. 77), for nearly all their borrowings. As from January 1953, they were permitted to borrow in the open market. In October 1955, the Chancellor of the Exchequer announced that he had asked the board, before it granted any further advances, to put all applicants on inquiry as to their ability to raise the finance on their own credit either in the stock market or in the mortgage market. Any advances granted were at a rate of interest reflecting not Government credit, but the credit of local authorities of good standing in the market for loans of comparable periods.

The National Debt

So far, borrowing on a large scale has been undertaken only to finance deficits during or immediately after a war. The National Debt rose from £651 million in 1914 to £7,435 million at the end of the first world war, and from £7,131 million in 1939 to £23,637 million in 1946. On the 31st March, 1959, the total National Debt was £27,375 million, of which £2,187 million was repayable in currencies other than sterling, mainly to the United States and Canadian Governments. Of the £25,188 million of internal debt, about £5,629 million was short-term debt, mainly in the form of 91-day bills on the Treasury, while the long-term loans included a variety of stocks, bonds, loans, and certificates carrying fixed rates of interest (ranging from $2\frac{1}{2}$ to $5\frac{1}{2}$ per cent) and with fixed or indeterminate dates of repayment.

PUBLIC FINANCE IN NORTHERN IRELAND

The general system of public finance in Northern Ireland is, in its main features, similar to that operating in the United Kingdom as a whole, under which public revenues, with a few minor exceptions, are paid into the Exchequer, from which no money can be withdrawn except on the authority of Parliament. That authority is expressed in the case of Consolidated Fund charges in permanent legislative form, and in the case of Supply Services by annual Appropriation Acts based on estimates prepared by departments and sanctioned by the Ministry of Finance.

The major portion of taxation (customs duties and most excise duties, purchase tax, income tax, surtax and profits tax) is imposed by the United Kingdom Parliament over the whole country, and the amount levied in Northern Ireland is paid, in the first instance, into the United Kingdom Exchequer. From this amount, known as 'Reserved' Revenue, there is deducted and retained by the United Kingdom Treasury, under the Government of Ireland Act, 1920, the sum contributed by Northern Ireland towards Imperial Services (called the 'Imperial Contribution'), the cost of the administration of the Supreme Court, the Post Office, and other Reserved Services, and the cost of collecting Reserved Revenue. The balance, termed the 'Residuary Share of Reserved Taxes', is paid over to the Exchequer of Northern Ireland and joins with the proceeds of taxes levied and collected by the Government of Northern Ireland, called 'Transferred' Revenue, and with other non-tax receipts of a miscellaneous nature, to form the public income. The items of Transferred Tax Revenue are estate duties, stamp duties, pool betting duty, bookmakers' licence duties, cinemas (entertainments duty), television licence duty, most excise licence duties, and motor vehicle duties.

A Joint Exchequer Board, representative of the Treasury and the Ministry of

Finance for Northern Ireland, constituted in accordance with the Government of Ireland Act, 1920, determines the amount of Reserved Revenue and the cost of Reserved Services attributable to Northern Ireland for each year, the amount of the Imperial Contribution and such other questions affecting the financial relations of the two Governments as may be referred to it.

In the Northern Ireland Budget for 1959-60 (year ending 31st March), total revenues were forecast at £100.54 million and expenditure at £97.49 million. After allowing for a small Budget surplus of £50,330, the Imperial Contribution was provisionally estimated at £3 million.

The Public Debt of Northern Ireland, totalling £54 million on 31st March, 1959, is fully covered by repayable advances and investments held by the Ministry of Finance.

Outside the Exchequer system in Northern Ireland, various funds have been established, in addition to statutory Reserve and Sinking Funds, for specific purposes. In general, these funds follow the United Kingdom pattern, the principal being those relating to National Insurance and Government loans. The latter constitutes a pool of capital money available for local and public authority borrowings; on 31st March, 1959, a sum of approximately £76 million was outstanding against such authorities.

BANKING AND PRIVATE FINANCE

The British banking system is long established and well integrated. It comprises a central bank; commercial banks which carry on the usual main banking services; the United Kingdom offices of various banks whose main business is in other countries; and various specialised banks and similar financial institutions.

The Bank of England

The Bank of England is the central bank and its principal business is to act as banker to the Government and to the other banks, as the agent of the Government for important financial operations and as the central note-issuing authority; it also maintains relations with central banks overseas. It was established in 1694 by Act of Parliament as a corporate body, and its entire capital stock was acquired by the Government under the Bank of England Act, 1946.

As the central bank, the Bank of England acts in conjunction with other banks and financial institutions in co-ordinating the application of the Government's monetary policy. One of the main instruments for this purpose is the Bank Rate¹—the minimum rate at which the Bank of England will discount approved bills of exchange.

As banker to the Government, the Bank of England holds the main Government accounts and it acts as the Government's agent for the issue and registration of Government loans. It also operates, for the Treasury, the administration of exchange control which has been in force since 1939.

The commercial banks maintain large balances with the Bank of England and these balances form part of the banks' cash reserves.

The Bank of England has the sole right in England and Wales of issuing bank notes. Notes thus issued need a 100 per cent cover in gold and securities, the part covered by the latter being the 'Fiduciary Issue', the level of which is subject to parliamentary control. In practice very little gold is now held by the Issue Department of the Bank of England, the bulk of the United Kingdom gold (and foreign

¹ At 31st August, 1959, the Bank Rate stood at 4 per cent.

exchange) reserves being in a separate account, known as the Exchange Equalisation Account, originally established in 1932, for the purpose of checking undue fluctuation in the exchange value of sterling. The provision of coin for circulation is the responsibility of a Government department, the Royal Mint.

In August 1959, the comprehensive report was published of a committee set up by the Government in April 1957, under the chairmanship of Lord Radcliffe, to inquire into the working of the monetary and credit system and to make recommendations; this was the first inquiry of this kind since 1931.

The Commercial Banks

The banks handling the major part of the domestic banking business in the United Kingdom are, in the main, limited liability companies which are subject to the ordinary law relating to such companies.

Some of the main features of the United Kingdom commercial banks are:

1. A relatively small number of banks control a large number of branches. United Kingdom banking members of the British Bankers' Association include 11 London clearing banks, 5 banks in Scotland and 3 in Northern Ireland, and control nearly 13,000 branches and have total assets of over £8,000 million.
2. The volume of cheques handled is very large and, in spite of a stamp duty of 2d. on each cheque, many payments—and even relatively small payments—are made by cheque. The average daily value of cheques, drafts, bills and bankers' effects cleared in 1958 through the London and Provincial Clearing Houses was £597 million; and many cheques do not, for various reasons, pass through clearing houses.
3. It is the practice of the chief United Kingdom banks to maintain a ratio of about 8 per cent between cash reserves and total deposits (of which about two-thirds are repayable on demand, the remainder being deposits at interest and subject to notice).

The banks make advances to customers partly in the form of overdrafts and partly in the form of loans (with or without collateral security); in either case, the advance is normally for a short term only, unless renewed.

The ratio of London clearing bank advances to total deposits declined from 42.9 per cent in 1938 to 17.4 per cent in 1946, but rose to a level of about 30.6 per cent in 1955–57. In 1958, following the relaxation of Government restrictions on the pattern and quantity of bank lending, the percentage moved upwards, and by March 1959 was 35.6 per cent.¹ This increase was accompanied by innovations in bank lending practice, including the introduction of schemes for personal loans repayable by fixed monthly instalments over periods up to two years, and facilities for limited service accounts at low cost. Another development was the acquisition, by many banks, of share capital in hire purchase finance companies.

4. Certain banks in Scotland and Northern Ireland have retained limited rights to issue notes (see p. 512); these issues, apart from an amount for each bank which is specified by legislation, must be fully covered by Bank of England notes and by coin.

¹ About 31 per cent of the banks' deposits at this time were covered by cash and other liquid securities (e.g., money at call and short notice and bills discounted), while 29.1 per cent were covered by British Government and other long-term securities.

United Kingdom Offices of Banks Operating Mainly Overseas

The importance of London as a financial and trading centre and as the largest city of the British Commonwealth has encouraged many banks whose main business is in other Commonwealth countries and foreign countries to maintain London offices¹; in some cases, indeed, the institutions concerned are United Kingdom companies and the London office is the head office. These London offices form part of the complex structure engaged in the financing of trade not only between the United Kingdom and other countries but also in goods which are shipped direct between other countries.

Savings Banks and the National Savings Movement

The function of Trustee Savings Banks and the Post Office Savings Bank is to provide facilities for the investment of voluntary savings and particularly of the small savings of persons with low incomes. Both these types of banks were already well established during the nineteenth century. The growth of their business was, however, encouraged in the first world war when the War Savings Committee was set up under Government auspices to promote an official savings drive. A new type of long-term security for the small investor was inaugurated at that time. This was the National Savings Certificate, with interest payable only on encashment, but free of income tax. From this war-time drive originated the present National Savings Movement devoted to the encouragement of the widespread investment of savings in Trustee Savings Banks and the Post Office Savings Bank and in National Savings Certificates and Defence Bonds. The policy of the movement is determined by the National Savings Committee for England and Wales and similar committees for Scotland and Northern Ireland.² The committees are bodies of independent persons representing regional savings organisations and various national institutions connected with such matters as finance, industry and education. They are assisted by a salaried staff of civil servants. Voluntary local savings committees, often assisted or promoted by local authorities, co-ordinate the work of voluntary local savings groups. In 1956, the Government introduced an additional type of savings security—Premium Savings Bonds, issued in £1 units—which, after an initial period of six months and thereafter monthly, give investors a chance to win prizes ranging from £25 to £1,000 instead of receiving interest. By the end of June 1959, about £225 million had been invested in this form of savings.

Trustee Savings Banks are managed by boards of honorary trustees and managers, and most of the funds deposited with them are ordinary deposits which are withdrawable on demand or at short notice. These deposits are invested with the National Debt Commissioners, and the Government is responsible to the trustees for the repayment of the money so invested, with accrued interest, as and when required. In certain circumstances, Trustee Savings Banks also accept deposits of up to £2,000 for special investment. These deposits, which may receive a slightly higher rate of interest than ordinary deposits, are invested under the supervision of the National Debt Commissioners, but the Government is not responsible to the trustees for the repayment of these investments. In June 1959, there were about 1,330 Trustee Offices controlled by 83 independent banks.

¹ Twenty-eight overseas banks are members of the British Bankers' Association.

² The Northern Ireland Ministry of Finance is responsible for the administration of Ulster Savings, but the furtherance and organisation of the savings movement in Northern Ireland is the concern of a central voluntary committee, which is assisted by county and local committees and district groups, all of a voluntary nature.

The Post Office Savings Bank is the largest organisation of its kind in the world. It has over 22 million active accounts; in December 1958, total balances, which carry a Government guarantee, amounted to £1,644 million, about £75 per depositor. Through a centralised system of accounting, a depositor can pay in money or make a withdrawal at any one of some 20,000 post offices throughout the country.

To ensure that Savings Banks are used primarily by the small investor there is a limit of £500 on the amount which may be deposited by any individual in one year, and of £3,000 on the total balance which may be held by one individual in the ordinary departments of Trustee Savings Banks and in the Post Office Savings Bank. The maximum amount of National Savings Certificates which may be held by any one person is £750 worth of the current (tenth) issue, in addition to holdings of previous issues, and £500 worth of Premium Savings Bonds. The limit on individual holdings of the current issue of Defence Bonds (5 per cent) is £2,000; this is in addition to holdings of previous issues.

Co-operative Banks

The Co-operative Wholesale Society formed a deposit and loan department about the year 1870, and the right of a co-operative society to engage in banking was legally defined in the Industrial and Provident Societies Act of 1876. The primary purpose of the Co-operative Wholesale Society Bank was to serve the co-operative movement, whose financial centre it has become, but the bank has also come to include among its clients trade unions and other mutual societies, local authorities and individual depositors.

OTHER FINANCIAL INSTITUTIONS

It has been the policy of the commercial banks to leave the provision of many special financial facilities to other financial institutions. These facilities, which are supplementary to the credit facilities of the banking system, are mainly provided through the Discount Market, Finance Corporations, the Stock Exchange, Investment Trusts, Building Societies and the Insurance Market.

The firms engaged in such activities are in the main highly specialised, e.g., discount houses, stockbrokers, insurers, insurance underwriters and brokers. Another type of financial institution, the merchant bank, has been of great importance in the finance of trade and commodity dealings and in the flotation of major issues of bonds, particularly for overseas concerns and governments.

The merchant banks helped to give London an international reputation as the main world centre for short-term and long-term borrowing. Long-term loans for development purposes floated on the London market earned for Britain a continuing flow of interest and attracted a steady flow of orders for British goods and products. This increasing trade and also a large proportion of trade between foreign countries was usually financed by bills of exchange, which were accepted as payable at maturity by the merchant banks (also known as accepting houses) and were traded on the discount market, thus providing an easy method of transferring debts and claims.

The Discount Market

The main business of the Discount Market consists of trading in and holding commercial bills of exchange, United Kingdom Government Treasury bills and other short-term securities.

If the various firms which compose the Discount Market have insufficient funds of their own to finance the bills and securities which they wish to hold, they obtain

loans from the banks and, to a lesser extent, deposits from the public. In the main these loans and deposits may be called in at any time.

The commercial banks do not, in the ordinary way, buy Treasury bills at the weekly tenders except on behalf of customers, but purchase, from the Discount Market, bills which have been taken up by the market and held until they become of a currency required by the banks.

If the banks call in loans which they have made to the Discount Market and the latter is unable to cover its needs elsewhere, it will be forced to borrow from the Bank of England. It is not the practice of the commercial banks themselves to obtain direct loans from the Bank of England to augment their cash resources if the need arises.

Finance Corporations

Two corporations, the Finance Corporation for Industry Limited and the Industrial and Commercial Finance Corporation Limited, were set up in 1945 to assist in dealing with the problems of post-war reconstruction and development. Although the Government displayed considerable interest in their formation, the corporations themselves are ordinary limited companies with no official representation on their boards and having no recourse to public funds. Another finance corporation, the Commonwealth Development Finance Company Limited, was established in 1953 to assist development projects in the Commonwealth. Among other financial corporations of note are the Agricultural Mortgage Corporation Limited, and the Scottish Agricultural Securities Corporation Limited.

Finance Corporation for Industry Limited

The FCI was formed to assist in the provision of capital (in amounts of £200,000 and upwards) for the re-equipment and development of major industries with a view to promoting efficiency and thereby assisting in the maintenance and increase of employment.

The FCI has an authorised and issued capital of £25 million and may borrow up to four times this amount, making a possible total of resources of £125 million. The share capital is held as follows: 40 per cent by insurance companies, 30 per cent by trust companies and 30 per cent by the Bank of England. As at the 31st March, 1959, the capital had been paid up to the extent of 2 per cent (£500,000); the liability of the shareholders in respect of the uncalled capital represents security to the banks that provide the funds out of which the FCI makes its advances.

The enterprises assisted by the FCI are concerned with a variety of products, e.g., steel, oil, chemicals, shipping, diesel engines, and electrical components.

Industrial and Commercial Finance Corporation Limited

The ICFC has a smaller issued capital than that of the FCI and has as its main object the provision of credit and finance by means of loan capital and share capital for industrial and commercial concerns in Great Britain, particularly in cases where the existing facilities provided by banking institutions and the Stock Exchange are not readily or easily available.

The authorised and issued share capital of the ICFC is £15 million, fully paid up. In addition, the corporation can borrow up to a further £30 million in the form of loan capital, and can thus have a maximum of £45 million available. Although the Bank of England has a token participation, the principal shareholders are the London clearing banks and the Scottish banks in proportion to their size; the loan capital is provided by all the shareholders in the same ratio as their shareholdings.

The corporation's function is to provide finance in sums ranging between £5,000

and £200,000 for small and medium-sized concerns. It has over 650 customers and has established branches in Birmingham, Leeds, Leicester, Manchester and Edinburgh.

Commonwealth Development Finance Company Limited

The Commonwealth Development Finance Company was set up in 1953 as a new channel for the investment of private capital in Commonwealth development schemes. Its issued capital is £26 million, held by the Bank of England and 149 business concerns in the United Kingdom and in other Commonwealth countries. The company is empowered to borrow up to twice its issued capital. At the end of March 1959, its commitments totalled £15.5 million.

Agricultural Mortgage Corporation Limited

The primary function of this corporation, which was established in 1928, is to grant long-term loans against first mortgages on agricultural lands and buildings in England and Wales. The share capital was subscribed by the Bank of England and other banks, but the funds are mainly derived from public issues of debentures, of which about £36 million is outstanding.

The Scottish Agricultural Securities Corporation Limited

This corporation was established in 1933 under the provisions of the Agricultural Credits (Scotland) Act, 1929. Its share capital is subscribed by four Scottish banks. It fulfils broadly similar functions in Scotland to those of the Agricultural Mortgage Corporation in England.

The Stock Exchanges

Although there are several Stock Exchanges in the United Kingdom, the London Stock Exchange is by far the most important, and is one of the world's two foremost free markets in securities.

The Stock Exchanges provide a means by which a holder of quoted stocks or shares (all important securities are quoted) can, if he wishes, find a buyer for his securities; they are also a most important element in the raising of new capital by Government and commercial borrowers.

The Stock Exchanges do not fix dealing prices; the terms on which bargains are made between members reflect the interaction of supply of and demand for the securities concerned. All the Stock Exchanges operate under strict rules of conduct which they formulate themselves.

Controls over Borrowing

Since 1932, there has been some degree of control over capital issues and other forms of large-scale borrowing in the United Kingdom. The 1932 controls, and such modifications as were made up to 1939, were without a statutory basis but resulted from public requests by the Chancellor which the various markets observed. At the outbreak of war in 1939, the Foreign Transactions (Advisory) Committee, which had been set up in 1936 to advise the Treasury on issues involving remittances to countries outside the Commonwealth, was renamed the Capital Issues Committee and was given the wider task of advising the Treasury on the administration of the statutory control of capital issues (and analogous transactions).

The end of the war in 1945 saw the retention of the Capital Issues Committee with its primary function unchanged; provision for capital issues control on a more permanent basis was made the following year with the passing of the Borrowing (Control and Guarantees) Act, 1946, which empowered the Treasury to make orders regulating borrowing and the raising of money by the issue of shares.

In February 1959, controls over capital issues were considerably relaxed by a general consent given by the Treasury, under powers conferred by the Control of Borrowing Order, 1958. The effect of the new regulations is that, with the exception of redeemable bonus issues, it is no longer necessary for any person or company resident in the United Kingdom to apply individually for Treasury consent before borrowing money in Great Britain or before issuing shares or other securities. Bank of England sanction is still needed for the terms and timing of issues over £50,000 by local authorities and other trustee borrowers, and for the timing of industrial issues over £1 million. Issues exceeding £50,000 by overseas borrowers are still subject to control by the Treasury.

Investment Trusts and Unit Trusts

Investment trusts and unit trusts provide media through which investors may spread their risks and obtain the benefit of skilled management.

The ordinary type of investment trust is constituted as a public company, registered under the Companies Acts with limited liability; its business is to invest its capital in a range of companies. Like other companies, it may issue several types of stocks or shares and may retain part of its profits to build up reserves. Investment trusts grew to importance in the latter half of the nineteenth century and have been prominent in directing capital towards overseas investment.

Unit trusts are constituted by trust deed between a management company and a trustee company which holds the securities. Normally, the management company buys a block of stock exchange securities spread over several companies in certain sectors of the economy and re-sells them to the general public in the form of units or sub-units. The price at which the sub-units are sold includes a service charge which represents the remuneration of the managers of the trust. Fixed trusts are composed of investments which are determined in advance and which may not be changed. In flexible trusts, on the other hand, the managers may widen the field of investment and change the investments as they judge desirable.

Although the first unit trust appeared in London in 1868, it was not until about 1931 that unit trusts became important. The Prevention of Fraud (Investments) Act, 1939, amended by the Companies Act, 1947, and consolidated in the Prevention of Fraud (Investments) Act, 1958, brought unit trusts under the control of the Board of Trade. In 1953, restrictions on the growth of unit trusts were lifted by the Capital Issues Committee; this was followed by a renewal of interest in this form of investment, and several large unit trusts of the flexible type have been authorised in recent years. By the end of 1958, the total funds invested in unit trusts amounted to about £100 million.

The Insurance Market

The institutions providing insurance services fall into two main groups: the insurance companies and Lloyd's. Additional life assurances facilities are also provided in the United Kingdom by certain Friendly Societies.

Insurance Companies

There are about 310 British insurance companies, the large companies of international repute accounting with their subsidiaries for about a third of this total. In addition, about 110 overseas companies carry on business (and even more companies are represented) in the United Kingdom, thus emphasising the international nature of the market. The natural centre of the market is in London, but some of the large companies have their administrative headquarters elsewhere.

In 1957, the premium income of British insurance companies amounted to about £1,325 million. The three non-life branches—fire, accident and marine—together accounted for some £788 million. 'Ordinary branch' life assurance accounted for £397 million and the balance of £140 million was represented by 'industrial' life assurance (i.e. a system of assurance in which the contributions are collected by house-to-house visits at intervals of less than two months).

The total assets of British insurance companies at the end of 1957 are estimated to have been about £5,590 million. This included £1,207 million invested in British Government and British Government guaranteed securities, £1,117 million invested in debenture and loan stocks and preference and guaranteed stocks and shares, £940 million in ordinary stocks and shares, £139 million in municipal and public boards' securities, and £659 million in mortgages.

Lloyd's

Lloyd's is an incorporated society of underwriters in London. Although in its earlier history the activities of Lloyd's were confined to the conduct of marine insurance business, during the last sixty years there has also been built up at Lloyd's a very considerable world-wide market for the transaction of other classes of insurance business, except life assurance of which the amount transacted at Lloyd's is negligible. In addition to its insurance activities, Lloyd's maintains a world-wide organisation for the collection and diffusion of shipping intelligence (see pp. 356-7).

The name 'Lloyd's' is derived from Edward Lloyd's coffee house, established in the late seventeenth century, where merchants with maritime and other interests gathered to transact business. By the middle of the eighteenth century, Lloyd's coffee house had become the principal centre of underwriting business and of intelligence about shipping movements. In 1871, Lloyd's was incorporated by Act of Parliament.

The conduct of insurance business and the affairs of the Society of Lloyd's in its corporate capacity are administered by the Committee of Lloyd's.

The interests of a holder of a Lloyd's policy are safeguarded in the following ways: (1) every Lloyd's underwriter is liable for his underwriting debts to the full extent of his means and is required to lodge security by way of a deposit with the Committee of Lloyd's; (2) the whole of the premiums received by an underwriter must be placed in a trust fund to be used exclusively for the payment of his underwriting liabilities and expenses, and only ascertained profits can be released to the underwriter and then only with the consent of the trustees; and (3) every underwriter must submit his accounts to an annual audit.

The usual practice of underwriters today is to form themselves into groups known as syndicates which generally specialise in particular branches of insurance. The underwriters forming the syndicate appoint an agent who is empowered to accept risks on their behalf and to control all matters concerned with the syndicate's business. If the insurance is for a relatively large amount, several syndicates may participate, but each underwriter is individually liable only for the proportion of the risk accepted on his behalf.

Underwriters may not accept business directly from the public, but must transact through Lloyd's brokers (see p. 443) in London, who must be connected with Lloyd's, either as members or subscribers.

The total premium income of Lloyd's underwriters in 1957 after deduction of brokerages, commissions, returns and reinsurance premiums was about £268 million, of which some £120 million was in respect of marine, aviation and transit insurance.

Insurance Brokers

The insurance market is completed by the insurance brokers, acting on behalf of the insured; brokers are an essential part of the Lloyd's market and a valuable part of the company market. Many brokers specialise in reinsurance business, acting as intermediaries in the exchange of contracts between companies, both British and overseas, and often acting as London representatives of the latter.

International Insurance Services

Over two-thirds of the fire, accident and marine insurance business comes from abroad, partly by direct placing in London and partly from branches and agencies established in over 100 countries. The basic principle of this international business is that resources capable of meeting any potential loss are instantly available for use in any part of the world.

Behind this large and international volume of business stand the assets of the companies (aggregating over £5,500 million) in addition to substantial reserves of uncalled capital and the whole of the deposits, underwriting trust funds and personal fortunes of Lloyd's underwriters.

Building Societies

The principal function of building societies is to supply long-term loans on the security of private dwelling houses purchased for owner occupation, though loans are occasionally made on the security of commercial and industrial premises and farms. The funds of building societies are derived mainly from the general public who invest in shares or deposits. The amount of share capital is not fixed but may be regulated in accordance with the amount of mortgage business; shares are not dealt with on the Stock Exchange but may be withdrawn in cash if notice is given. The rapid expansion of building society activity in the twentieth century has been accompanied by a concentration of most of the business in the hands of a few very large societies. At the end of 1958, 744 societies were in operation, with total assets of £2,617 million. The amount advanced on mortgage in 1958 was £374 million.

Under the House Purchase and Housing Act, 1959, the Treasury was empowered to make advances to building societies which fulfilled certain requirements as regards assets and liabilities, liquid funds, reserves and other matters. These advances are for relending to prospective house purchasers in respect of houses built before 1st January, 1919, which do not exceed £2,500 in value.

XIII. TRADE

Although relatively small in area and accounting for only 2 per cent of the world's population, the United Kingdom conducts 10 per cent of international trade. It has acquired this position as a consequence of several factors. It was one of the earliest countries to remove legal and fiscal restrictions on the internal movement of persons and goods, and the first to develop adequate facilities for the movement of large quantities of goods by mechanical transport (canals, roads, railways and steamships). With its resources of coal and iron, and its succession of mechanical inventions, Britain was also the first country to industrialise on a large scale and to produce a wide variety of consumer goods in large quantities. In addition, Britain evolved, over a long period of years, the specialised financial services needed to facilitate the maximum volume of trade.

This chapter outlines some of the main features of Britain's overseas trade and payments and internal trade. Although some account of overseas trade and payments is essential to an understanding of Britain's economy, only a brief treatment of trade policy and commercial relations has seemed appropriate in this handbook which is concerned with the United Kingdom, its people and internal institutions.

OVERSEAS TRADE

In the nineteenth century Britain attained a pre-eminent position in international trade. At the end of the century Britain's share of exports of manufactures entering into world trade was about 33 per cent. Its share of world imports was somewhat larger than that of world exports, as imports into Britain were paid for not only by exports of goods but by interest on overseas investments and net receipts from shipping and a variety of financial services. Even before 1914, however, this supremacy was being increasingly challenged by other nations, including Germany and the United States, and although Britain's imports and exports increased in absolute terms over the years, its share of the world total tended to decline. By 1937, Britain's share in world exports of manufactures, measured by value, had fallen to 22 per cent compared with 24 per cent in 1929 and 30 per cent in 1914. In the years immediately following the second world war, Britain's share rose again, and in 1950 was 25 per cent; but by 1958 it had fallen back to 18.2 per cent.

For over a century, Britain's internal economy has been vitally dependent on international trade. Britain relies upon imports for half its total consumption of foodstuffs and nearly all the raw materials needed for its industries. Its exports of goods represent 30 per cent of the output of manufacturing industry; exports of goods and services together absorb about a fifth of the gross national product.

In 1958, Britain was the world's second largest exporter and importer. It is a major supplier of machinery, ships, road and railway vehicles, aircraft, metal manufactures, chemicals and textiles. Britain is also one of the world's largest markets for foodstuffs, metals, cotton, wool, petroleum and many other products.

PATTERN OF TRADE

Changes since 1938 in value, volume, composition and geographical distribution of imports and exports are outlined in the following paragraphs.

Value and Volume

Imports rose in value from £919 million in 1938 to £1,802 million in 1947 and £3,780 million in 1958. The rise in value of exports was from £471 million in 1938 to £1,142 million in 1947 and £3,208 million in 1958.

Calculations of changes in trade volume (i.e. changes after eliminating variations due to price movements) compared with pre-war cannot be made with precision as the relative values of different types of goods on which the volume figures are based have changed considerably since 1938. Broadly speaking, however, by 1947, the volume of imports was a quarter less than before the war and exports had regained their pre-war volume. It has been estimated that the volume of imports in 1958 was only just over the 1938 figure, while the 1958 volume of exports approached a level twice that of 1938. Statistics showing the value and volume of imports and exports in 1938 and in post-war years are set out in Table 31. The diagram on p. 446 shows the changes in the volume of imports and exports from 1947 to 1958.

TABLE 31
IMPORTS AND EXPORTS: ANNUAL FIGURES

	1938(a)	1947	1950	1953	1956	1957	1958
<i>Value (£ million)</i>							
Total imports c.i.f.(b)	919	1,802	2,609	3,343	3,886	4,071	3,780
Exports of UK goods, f.o.b.(c)	471	1,142	2,174	2,582	3,172	3,324	3,208
Re-exports f.o.b.(c) ..	61	59	85	105	146	134	147
<i>Volume Index Nos.</i>							
Total imports, 1954 = 100 ..	110(e)	80	89	99	111	114	114
Exports of UK goods, 1954 = 100 ..	60(e)	63	101	96	113	116	111
<i>Price Index Nos.</i>							
Imports, 1954 = 100 ..	n.a.	n.a.	85	101	105	107	99
Exports, 1954 = 100 ..	n.a.	n.a.	85	101	106	111	110
<i>Terms of Trade(d)</i>							
1954 = 100 ..	75(e)	90(e)	100	100	99	96	90

Sources: *Accounts Relating to Trade and Navigation of the United Kingdom*, and Statistics Division, Board of Trade.

(a) Silver bullion and all coin (other than of gold) not of legal tender in the United Kingdom are excluded from 1938 figures.

(b) 'Cost-insurance-freight', i.e. including shipping, insurance and other expenses incurred in the delivery of goods as far as their place of importation in the United Kingdom. Most of these expenses represented earnings by United Kingdom firms.

(c) 'Free-on-board', i.e. the cost of the goods to the purchaser abroad, all costs and charges accruing up to the time of placing the goods on board the exporting vessel having been paid by the seller.

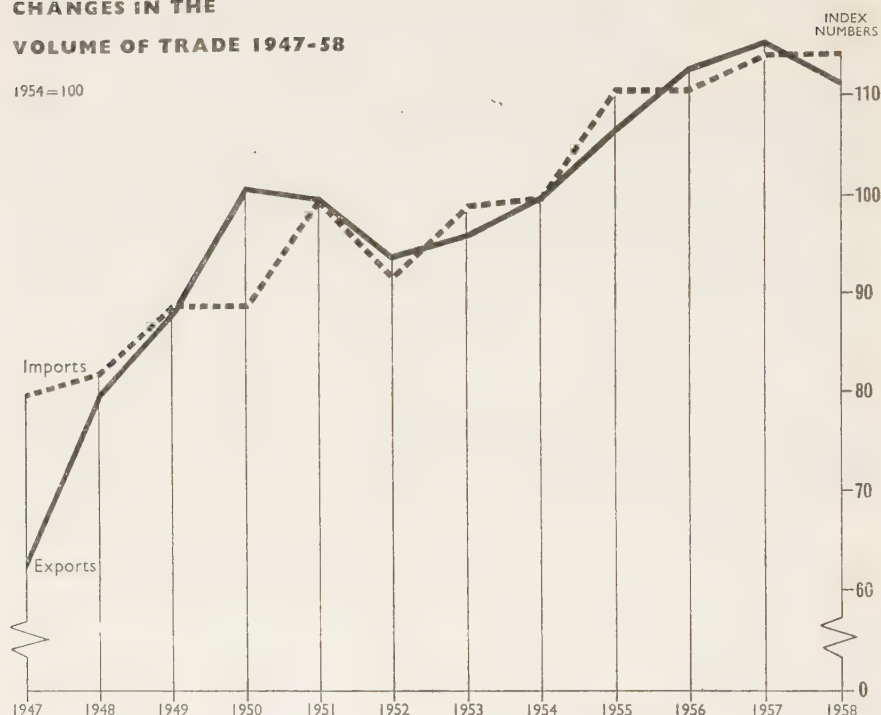
(d) The ratio of import to export price index numbers: a rise indicates an adverse movement.

(e) Approximate.

n.a. = not available.

CHANGES IN THE VOLUME OF TRADE 1947-58

1954 = 100



Some indication of the increased importance of exports in the national economy is shown by the rise in the proportion of total national income derived from export earnings—from 10 per cent in 1938 to 12 per cent in 1947 and 17 per cent in 1958. Over the same period, the rise in the proportion of expenditure on imports to gross national expenditure was smaller—from about 16 per cent in 1938 to 17 per cent in 1947 and an average of 18 per cent in 1956-58.

Commodity Composition

A short analysis of the commodity composition of imports and exports in 1958 is given in Table 32.

Owing to the expansion of the output of both domestic agriculture and industry by about 60 per cent compared with 1938, Britain relies relatively less than before the war on food imports, but needs a relatively larger supply of imported raw materials for its industrial plants. Whereas 47 per cent by value of total imports in 1938 consisted of food, beverages and tobacco, the proportion in 1948 was only 42 per cent, and in 1958, 40 per cent. On the other hand, the proportion for basic materials rose from 26 per cent in 1938 to 31 per cent in 1948, but was reduced to 24 per cent in 1958. Imports of manufactures in 1958 represented 24 per cent of total imports, a slightly higher proportion than in 1938. Imports of fuels rose from 5 per cent of the total in 1938 to 12 per cent in 1958, on account of increased consumption of petroleum products.

As compared with before the war, exports of engineering products have increased very considerably in relative importance and in 1958 accounted for 43·6 per cent of total exports as compared with an annual average of 20·1 per cent in 1935-38. The share of chemicals also shows an increase, from 6·3 per cent in 1935-38 to 8·2 per cent in 1958. On the other hand, the share of textiles declined from 24 per cent in 1935-38 to 9·2 per cent in 1958. In the fuels group, exports of petroleum have partially replaced those of coal.

TABLE 32
COMMODITY COMPOSITION OF IMPORTS AND EXPORTS IN 1958

Commodity Group	Imports		Exports	
	£ million	%	£ million	%
Food, drink and tobacco	1,506	40	194	6
Basic materials	908	24	109	3
Mineral fuels and lubricants	441	12	133	4
Manufactured goods	909	24	2,687	84
Miscellaneous	16	—	85	3
TOTALS	3,780	100	3,208	100

Source: *Accounts Relating to Trade and Navigation of the United Kingdom.*

Further details of the percentage composition of United Kingdom exports are set out in Table 33.

TABLE 33
PERCENTAGE COMPOSITION OF UNITED KINGDOM EXPORTS

Per cent

Commodity	Average 1935-38	1948	1954	1957	1958
Engineering products ..	20·1	35·8	38·0	40·8	43·6
Metals	13·4	11·9	12·7	14·4	13·5
Textiles	24·0	19·3	13·4	10·4	9·2
Chemicals	6·3	6·8	7·6	8·0	8·2
Other manufactures ..	11·9	12·3	10·9	10·6	10·6
Coal, coke and briquettes ..	8·0	2·8	2·5	1·9	1·0
Petroleum	1·0	0·6	3·1	2·7	3·1
Food, beverages and tobacco	7·4	5·9	5·9	6·2	6·0
Other products	7·9	4·6	5·9	5·0	4·8
TOTALS	100	100	100	100	100

Source: Statistics Division, Board of Trade.

Area Distribution

An analysis of the area distribution of Britain's overseas trade is provided in Table 34, which shows the sources of imports and destination of exports by currency areas in the years 1938, 1950, and 1958.

TABLE 34
UNITED KINGDOM TRADE BY CURRENCY AREAS

Percentages

	1938	1950	1958
Imports c.i.f.(a)			
Non-sterling			
Dollar area	23	18	21
OEEC countries and dependencies	24	25	25
Other	22	19	16
Sterling area	31	38	38
TOTALS	100	100	100
Total Exports f.o.b.(b)			
Non-sterling			
Dollar area	11	13	18
OEEC countries and dependencies	27	26	26
Other	20	14	12
Sterling area	42	47	44
TOTALS	100	100	100

Source: *Board of Trade Journal*.

(a) See footnote (b) to Table 31, p. 445.

(b) See footnote (c) to Table 31, p. 445.

The main changes and other notable features shown in Table 34, which analyses distribution by currency areas, are:

1. The proportion of imports drawn from the sterling area (see p. 459) in 1958 was much higher than before the war (38 per cent as against 31 per cent).
2. The proportion of imports from the dollar area (chiefly the United States and Canada) after declining from 23 per cent in 1938 to 18 per cent in 1950 recovered to 21 per cent in 1958.
3. The dollar area has been taking an increasing proportion of exports in the post-war years (18 per cent in 1958, as against 13 per cent in 1950 and 11 per cent in 1938).
4. The United Kingdom's trade with the member countries of the Organisation for European Economic Co-operation (OEEC) and their dependencies accounted for about a quarter of the total imports and exports, both in 1938 and in 1958.
5. Trade with 'other non-sterling countries' (including the Soviet bloc countries and non-dollar Latin America) in 1958 formed an appreciably lower proportion of the total than it did before the war.

Table 35 shows Britain's principal markets and principal supplier countries in 1958, and the percentage change compared with 1957.

TABLE 35
EXPORTS AND IMPORTS IN 1958 BY MAIN COUNTRIES OF DESTINATION AND ORIGIN

Total Exports(a) to:	Value (£ million)	% change on 1957	UK Imports from:	Value (£ million)	% change on 1957
United States ..	293	+17(b)	United States ..	352	-27
Australia ..	237	+ 0	Canada	309	- 4
Canada	194	- 3	Australia ..	199	-20
South Africa ..	187	+ 8	New Zealand ..	161	-12
India	160	-10	Netherlands ..	159	+21
Western Germany	141	+14	India	139	-11
New Zealand ..	129	- 8	Western Germany	136	+ 9
Irish Republic ..	117	+ 6	Sweden	135	-14

Source: *Board of Trade Journal*.

(a) Including re-exports.

(b) This comparison with 1957 excludes silver bullion repayments to the United States in 1957.

In 1958, the Commonwealth provided a market for 45 per cent of the United Kingdom's total exports, while the six countries of the European Economic Community or Common Market (Belgium, France, Italy, Luxembourg, the Netherlands and Western Germany) and their dependencies took 14 per cent, the United States 9 per cent, the Middle East 6 per cent, Latin America 5 per cent, and the rest of the world 21 per cent.

Re-Export Trade

Re-exports are goods which are exported (1) in the condition in which they are imported or (2) after having undergone minor operations—e.g., simple blending, husking, repacking—which leave them essentially unchanged. For some hundreds of years Britain has been an important centre of re-export trade though, over the past 45 years, its importance relative to total United Kingdom export trade has declined. The greater part of United Kingdom re-export trade has always been in raw materials and foodstuffs, e.g., wool, rubber, tea, non-ferrous metals and fur-skins. Recently, a considerable re-export trade has developed in machinery which has undergone repair and maintenance in the United Kingdom. Traditionally, re-export commodities are imported from Commonwealth countries and re-exported to countries in Europe.

In 1958 the total value of re-exports was £147 million, and the principal items were: rubber, fur-skins, raw wool, tea, and aeroplane engines.

Invisible Transactions

As previously mentioned (see pp. 444-5), the United Kingdom normally imports more goods than it exports; the gap is, as a rule, more than covered by net earnings from invisible transactions. Table 36 provides statistics of the receipts,

countries and interest payments on long-term loans from Canada and the United States. Receipts from travel have increased greatly since 1950, reflecting the growing importance of the British tourist industry (see below). The largest component under 'other items (net)' is the overseas transactions of United Kingdom oil companies (this does not include United Kingdom oil imports and exports, oil for the armed forces overseas and capital items, which come under other sections of the accounts). Other major items are: payments and receipts in respect of insurance, civil aviation and films; expenditure of United States and Canadian forces in Britain; net earnings of merchants; and royalties, commissions, banking and other services.

Tourist Trade

Since the second world war, the tourist industry has grown considerably in importance and is now one of Britain's largest earners of foreign currency. Over the period 1947-57, earnings from the foreign tourist trade and business travel amounted to the equivalent of £856 million, in addition to £375 million earned by associated British shipping and air services. In 1958, tourist receipts from overseas amounted to £137 million. United Kingdom residents on holiday or travelling on business overseas spent about £150 million in the same year.¹

The total number of visitors to the United Kingdom in 1958 was 1¼ million²—double the 1950 total and almost three times that of 1937. There was a further marked increase in the number of visitors in 1959.

The *British Travel and Holidays Association*, which is a grant-aided body, is concerned with the promotion of the tourist trade, particularly by means of publicity overseas. It maintains offices in seven overseas countries and agencies and representatives in several other countries overseas. The association was formed in April 1950 by the merger of the British Travel and Holidays Board and the Travel Association. Its work is directed by a board consisting of a chairman and 23 members. The President of the Board of Trade appoints the chairman and eight members, the council of the association elects seven members, the Scottish, Welsh, and Northern Ireland tourist boards between them appoint four members and the association's board has power to co-opt four members to represent tourist interests not otherwise covered.

CONDUCT OF TRADE

It has been a major aim of successive United Kingdom Governments since the second world war to work for the removal of restrictions on trade and payments, to secure a reduction of impediments to exports and, when possible, to restore the convertibility of sterling. To this end, Britain has taken a leading part in the setting up of such organisations as the International Monetary Fund (IMF), the General Agreement on Tariffs and Trade (GATT), the Organisation for European Economic Co-operation (OEEC) and the European Payments Union (now succeeded by the European Monetary Agreement), and has played a major part in these organisations' activities, especially as regards the freeing of trade from the restrictions which grew up in the war and post-war periods.

In addition to substantial reductions in tariffs on imported goods, carried out through the GATT, the United Kingdom has greatly relaxed its quota restrictions on imports and has modified its exchange restrictions on foreign currencies. By

¹ For foreign currency allowances for United Kingdom tourists, see p. 454.

² This total excludes tourists (other than aliens) from the Irish Republic and foreign visitors in transit to other destinations.

the end of 1958, nearly all its imports from the sterling area, 94 per cent of those from OEEC member countries and about three-quarters from dollar countries had been freed from quantitative restrictions. At the Commonwealth Trade and Economic Conference at Montreal, in September 1958, the Government announced its intention to free the remaining classes of dollar imports (mostly consumer goods and certain foodstuffs) by stages, beginning in 1959; restrictions on a wide range of these were removed in June 1959.

Tariff Policy

In the nineteenth century the United Kingdom became strongly attached to the principles of free trade, and at the beginning of the twentieth century the only customs duties were those imposed for revenue purposes on a small range of products. After the first world war, certain key industries, notably optical and scientific instruments and fine chemicals, were given protection for strategic reasons under an Act passed in 1921. It was not until 1932, however, that any serious departure was made from the principles of free trade. Under the Import Duties Act of that year, the United Kingdom imposed a duty of 10 per cent *ad valorem* on all imported goods except those on a Free List (mainly important raw materials and foodstuffs) and set up machinery for the imposition of additional duties and for additions to be made to the Free List where appropriate. This measure provided a degree of protection for British industry and, at the same time, a basis for negotiations with foreign countries already in possession of a tariff structure.

The principle of Imperial Preference had been introduced into the United Kingdom customs tariffs in 1919 and, as a result of the Ottawa Conference in 1932, agreements were concluded with independent Commonwealth countries providing for reciprocal preferential tariff treatment over a wide range of Commonwealth goods. The Import Duties Act had already permitted the duty-free entry of goods from the United Kingdom dependencies.

A series of bilateral trade negotiations with other countries between 1932 and 1939 resulted in some modification in the level of protection and in the Commonwealth preferences which had been established. During the second world war, because of Government purchase and import control, protection by the tariff was of relatively minor importance, and it was only after the substantial relaxation of quantitative import controls in 1949 that the tariff again became an effective instrument of protection.

Since the second world war, the United Kingdom's protective tariff has been considerably modified as a result of a series of multilateral tariff negotiations held under the auspices of the GATT, which permits the retention of existing tariff preferences, but prohibits the creation of new preferences. The United Kingdom has, however, obtained certain limited waivers from the GATT no-new-preference rule; these permit, under certain conditions, increased tariff protection for United Kingdom industries while preserving duty-free commitments for Commonwealth goods, and allow increased preferences for the benefit of Colonial products whose disposal is wholly or mainly dependent on the United Kingdom market. In the negotiations under the GATT, United Kingdom customs duties have been reduced, or bound against increase, on goods which account for about half of Britain's normal imports from other contracting countries, in return for concessions by those countries. Margins of preference have thereby been reduced in some instances, but only in return for compensating tariff concessions by other countries, and only after consultation with all the Commonwealth countries concerned.

The United Kingdom Government in February 1957 put forward proposals under which the six countries (France, Belgium, Luxembourg, the Netherlands,

Italy and the German Federal Republic) which in March 1957 signed the Treaty of Rome establishing the European Economic Community, and other members of OEEC, would be associated in a free trade area in Europe. Negotiating machinery for this purpose was set up by OEEC, and, in October 1957, OEEC made a unanimous declaration of intent to form such an area. Under the British proposals, protective tariffs and other barriers to trade affecting industrial products would be progressively reduced; agricultural products and foodstuffs would not be included, but the United Kingdom announced its readiness to enter into practical arrangements designed to secure freer and fairer trade in agriculture. In November 1958, however, these negotiations were suspended. In July 1959, the United Kingdom Government participated in negotiations, held in Stockholm, as a result of which it was agreed to establish a free trade association among seven countries outside the European Economic Community.

The Customs Duties (Dumping and Subsidies) Act, 1957, empowers the Board of Trade to impose duties on imported goods of any description which have been dumped or subsidised.

The Import Duties Act, 1958, replaced the existing legislation relating to the protective tariff (i.e. four main Acts and some 70 Finance Act provisions) and brought it up to date in a single measure. As a result of the Act, the tariff was recast into an internationally agreed form (the Brussels Nomenclature), which came into use from 1st January, 1959.

Private and State Trading

The export trade and virtually all the import trade of the United Kingdom are conducted by private firms.

Methods of export trading vary considerably, according to the firm, the industry, the product and the market. A good deal of United Kingdom export trade, especially of the smaller manufacturing firms, is conducted through export merchants in the United Kingdom; many firms, however, sell to importers and consumers abroad through their own agents or resident representatives in the countries concerned; in other cases, sales are made through a firm's own branch offices, distributing organisations or subsidiary sales companies established in overseas markets.

Similarly, in import trade, many large firms engaged in manufacture or domestic trade buy directly from overseas suppliers, while smaller firms may find it more convenient to buy through intermediaries such as import/export houses, commission agents, and the representatives of overseas firms.

In the immediate post-war years, nearly all the principal imported foods and raw materials and some other goods were bought wholly or mainly on Government account, and the Government was also the sole purchaser of nearly all domestically produced food and certain raw materials such as flax and timber. In later years, and particularly since 1951, private trading has been restored to each commodity. Since January 1957, overseas trading undertaken directly by the Government has been confined to jute goods. The purpose of this control is to assist the United Kingdom jute industry, which is concentrated in Dundee and still forms the mainstay of employment in that city.

CONTROLS ON TRADE AND PAYMENTS

A large number of the restrictions on the movement of goods and services and on payments have been progressively abolished. The following section gives a short account of the controls still in force.

Exchange Control

Exchange control, which includes *inter alia* control over the purchase and sale of gold and foreign currencies, was introduced at the outbreak of war in September 1939. The legal basis was at first the Defence (Finance) Regulations issued under the Emergency Powers (Defence) Acts, but in 1947 most of these temporary war-time powers were embodied in permanent legislation in the Exchange Control Act, 1947.

Exchange control does not affect transactions wholly within the sterling area. At present, it is imposed only on transactions between residents within the sterling area and residents outside it.

Although the main structure of exchange control has continued intact since 1939, several relaxations in its operation have been made in recent years. For example, in March 1954, the facility which certain countries possessing transferable accounts have enjoyed of settling current transactions between each other—as well as with sterling area countries—in sterling was extended to virtually all non-dollar countries; the facility now applies to capital as well as to current transactions. In February 1958, restrictions were lifted on the amount of sterling currency notes allowed to be brought into Britain from abroad. In December 1958, the facility for settling transactions between countries in sterling was further extended to cover all countries outside the sterling area (including the dollar countries) and at the same time sterling (other than that in 'blocked accounts') held by residents outside the sterling area was made freely convertible into foreign currency, including dollars.

Exchange control applies to exports of goods to destinations outside the sterling area, and, in general, these have to be paid for within six months in an acceptable currency or by sterling from an external account. Control is also exercised over imports, to ensure that currency authorised for their payment is in fact available.

Exchange control policy is the responsibility of the Treasury, but most of the administration is in practice carried out by the Bank of England as agent of the Treasury—and in turn the Bank of England has delegated to the commercial banks a wide variety of powers to deal with applications.

Tourist Currency Allowances

There are restrictions on the amount of currency and notes that United Kingdom tourists may take with them abroad. The position in September 1959 was as follows: for visits to non-sterling countries including the dollar area, United Kingdom tourists are entitled to a basic foreign currency allowance of £100 per twelve-month period, and the equivalent of this amount may be taken out of the country in foreign currency notes together with not more than £20 in sterling notes. These limits on the amount of currency notes that may be taken out also apply to United Kingdom tourists visiting sterling area countries, but there are no restrictions on the amount that may be taken to these countries in the form of travellers' cheques or letters of credit. Special arrangements apply to Norway, Sweden, Denmark, Greenland, and the Faroe Islands: United Kingdom tourists visiting these countries are allowed all reasonable amounts of currency, subject to a normal maximum of £250. Special allowances of currency are also made for visits overseas of United Kingdom businessmen; these are made available through the commercial banks.

Import and Export Control

The Import, Export and Customs Powers (Defence) Act, 1939, empowers the Board of Trade to make statutory orders prohibiting or regulating the import or export of goods. The powers of both import and export control derive from the same legislation, but the purpose and mechanism are quite distinct.

Import Licensing

In accordance with its international obligations under the GATT and the IMF, the United Kingdom Government has, as the balance of payments has permitted, progressively removed restrictions from most imports from the countries of the free world. This policy is carried out by means of Open General Licences, which from time to time are granted by the Board of Trade by virtue of temporary powers vested in them under the 1939 Act.

Goods still subject to control require a specific import licence. For most of these goods, quotas have been set up, either for individual countries bilaterally or for groups of countries on a global basis. Bilateral quotas are generally shared among their exporters by the authorities of the country to whom they are accorded; global quotas are generally divided by the United Kingdom authorities between importers, usually on the basis of their past share of the trade.

Export Controls

Except for the control necessary to establish that exports to destinations outside the sterling area are paid for in the proper manner (see p. 454), United Kingdom exports are not, except in a very minor way, subject to any Government control or direction. The few controls that are in operation are imposed to supervise exports of military and strategic importance, to conserve materials, such as metal scrap, which may be in inadequate supply, to assist exchange control operations in preventing the export of capital in the form of valuable goods, and to prevent the export of works of art classed as national treasures, such as paintings by old masters, manuscripts and antiques.

The operation of the export licensing control is such that goods are freely exportable to all destinations unless there is a specific ban on their export without licence. Normally, individual licences are required for specific consignments of goods subject to export licensing control, but, in a few cases, Open General Licences are issued. In other cases, bulk licences are issued to permit exports of specified quantities of controlled goods within a given period.

Goods controlled for strategic reasons, not included in the category of arms and ammunition, may be exported to the Commonwealth, the Irish Republic and the United States of America without licence.

GOVERNMENT ASSISTANCE TO OVERSEAS TRADE

The United Kingdom Government does not subsidise exports, but supplies information, advice and practical assistance (including credit insurance facilities) to exporters. In addition, the Government, in its general economic policy, seeks to create conditions in which export trade can flourish. This includes the use of fiscal, credit and other measures to maintain a stable economy and to control excessive demand for goods and services by the home market, and action through international negotiation to reduce barriers to the free flow of trade and to move towards the freest possible system of trade and payments.

Information and Advice to Exporters

The United Kingdom Government provides a service of information and advice to merchants and manufacturers in the export trade.¹ The Government department most concerned is the Board of Trade, which calls upon the assistance of overseas

¹ Export promotion is also assisted by the Scottish Council (Development and Industry), the Northern Ireland Development Council, and the National Industrial Development Council of Wales and Monmouthshire, see p. 254.

representatives. At each Embassy or Legation there is always an officer of high rank, a Minister, Counsellor or First Secretary (Commercial), who specialises in commercial matters. These officers direct the commercial activities of consular officers in their respective territories. At important centres in the Commonwealth there are Trade Commissioners, who are directly responsible to the Board of Trade.

Overseas officers regularly report on local economic and commercial conditions, pay special attention to local demand for particular commodities, and generally assist the exporter to overcome the difficulties he encounters in trade with the country in question, particularly those arising out of governmental regulations. These officers indicate potential demand for United Kingdom products, advise about methods of trading with particular areas, and seek out and pass on all opportunities for export business and inquiries for United Kingdom goods. Assistance is also given to United Kingdom exporters in appointing agents and locating potential importers. From the records the department keeps in London, brought up to date by reports from its overseas officers, it can provide information concerning any country on:

- (1) prospects for United Kingdom exports and requirements of particular markets;
- (2) governmental regulations affecting trade, including import restrictions and tariffs and duties on particular commodities;
- (3) methods of trading;
- (4) goods most likely to sell;
- (5) local tastes and preferences in design; and
- (6) the probity and influence of firms with which an exporter contemplates entering into business relations.

Export Credit Insurance

The Export Credits Guarantee Department, responsible directly to the President of the Board of Trade, is run on commercial lines to provide insurance for United Kingdom exporters and merchants against the main risks of financial loss incurred in overseas trading. These facilities have been developed over a period of more than thirty years, and the department now underwrites some £500 million worth of insurance a year for more than 4,000 policy holders; this sum represents about 18 per cent of the total United Kingdom export trade. The department is obliged to conduct its business on a self-supporting basis, taking one year with another, and cannot therefore be regarded in any way as a provider of subsidies to exporters.

The risks covered include insolvency or protracted default of the buyer, Government action which blocks or delays transfer of payment to the United Kingdom exporter, imposition of new import licensing restrictions in the buyer's country, war between the buyer's country and the United Kingdom, cancellation or non-renewal of a United Kingdom export licence, or 'any other cause of loss occurring outside the United Kingdom and not within the control of the exporter or the buyer, and not normally insurable with commercial insurers'. Cover may commence from the date of contract or (at lower premiums) from the date of shipment.

There are three main types of export insurance policy:

1. *Short-term policies* normally covering goods sold on terms of up to six months' credit. The exporter insures the whole of his trade, or the whole of his trade with an agreed group of markets, for the twelve months (or, in some cases, three years) covered by his policy. For certain engineering

- goods this type of cover is extended to goods sold on maximum credit terms of up to three years. Cover is also available for goods of foreign origin sold by a United Kingdom merchant to third countries, provided this trade does not conflict with direct United Kingdom exports.
2. *Medium-term policies* which cover capital and other goods sold on credit terms exceeding three years. Specific policies are negotiated for each individual contract.
 3. *Dollar market policies* for North America and the dollar account countries of Central and South America. The policies listed above cover risks affecting payments under a contract of sale: the dollar market policies are designed to reduce to manageable size the special risks of loss in breaking into these markets. The exporter insures against a percentage of the loss which may result if market surveys, advertising or sales promotion campaigns, or stock-holding, do not produce sufficient revenue to defray their cost. A similar but more extensive form of insurance is provided by 'joint venture' policies.

In the case of all the department's policies, the exporter or merchant is required to retain an interest in the debt or risk involved and, consequently, guarantees are given up to a maximum of between 85 and 95 per cent. Premium rates are assessed separately for each country, and vary according to the risks and the terms of payment. Cover is also available for United Kingdom concerns carrying out services for overseas firms.

Under the Export Guarantees Acts, 1949 to 1957, the Government has powers to give economic assistance to other countries (see p. 468).

Trade Fairs

The discontinuance of the annual British Industries Fair after the 1957 display held at Castle Bromwich, Birmingham, was the result of a decision to concentrate efforts upon specialised fairs. An inquiry carried out by the Federation of British Industries (FBI) in 1957 showed that the large majority of British trade associations favoured the development of specialised fairs, concentrating on the products of a particular industry or group of industries, rather than the general fair at which wide ranges of products are exhibited.

In the United Kingdom, over 60 specialised fairs are held every year and the number is growing steadily. An increasing number, at present about half the total, are international in character, and the remainder are national (i.e. open only to firms showing United Kingdom products). A list of the more important ones appears regularly in the fairs section of the *Board of Trade Journal*. Some of the specialised fairs, such as the Motor Show and the Radio and Television Show, attract large numbers of the public as well as many trade buyers from home and overseas, and provide an important means of advertising and selling British goods.

United Kingdom manufactures are shown at most of the large international trade fairs throughout the world. For example, the products of more than 350 United Kingdom firms were exhibited at the 1959 Milan Fair, and 100 at the 1958 Vienna autumn fair; the United Kingdom is always well represented at the Hanover and Posnan Fairs. At the more important of these international trade fairs there is often an official United Kingdom export promotion stand, where officials deal with trade inquiries and assist British exhibitors, and an impression is given of some aspects of British industry. In addition to these international events at which British goods are shown, there are, from time to time, specially organised displays of British products. Through a subsidiary company, British Overseas Fairs Ltd., the FBI has organised British Trade Fairs in Baghdad in 1954, in Copenhagen

in 1955, in Helsinki in 1957, and in Lisbon in 1959; and it is planned to hold one in New York in 1960. At the Brussels Universal and International Exhibition, held in 1958, the FBI organised a highly successful British Industries Pavilion. United Kingdom manufacturers have been prominent at the many important specialised international fairs which are held in North America and Europe.

Dollar Exports Council

In December 1951, the Dollar Exports Council replaced the Dollar Exports Board, which had been established in June 1949 by representatives of United Kingdom industry, trade, finance and organised labour, with the approval and support of the United Kingdom Government. It is an independent, self-governing, voluntary organisation whose purpose is to give all possible service to exporters from the United Kingdom to Canada and to the United States.

BRITAIN'S ROLE IN THE FINANCING OF INTERNATIONAL TRADE

By a process of evolution through the centuries, the United Kingdom has developed an efficient and adaptable organisation of trade and financial services, centred mostly on London, and capable of meeting the needs, not only of Britain itself, but of the world in general. Britain's supremacy in this respect derives from a number of factors—historical, geographical and economic—as well as the technical efficiency and low cost of its services. In the nineteenth century, the rapid growth of British industry, commerce and shipping under the stimulus of the industrial revolution made Britain the market as well as the workshop of the world. It became the site for the chief world markets in raw materials (see below), freight, insurance, and precious metals. At the same time, British capital was invested in overseas countries to assist their development, increase their output and exports, and provide markets for manufactured goods. London became the chief supplier of capital for many Commonwealth and foreign governments and a centre for entrepôt trade proceeding to and from the growing industrial areas on the continent of Europe and in North America. In course of time, the pound sterling and the sterling bill of exchange developed into the principal form of money for transactions between one country and another in all parts of the world.¹

Side by side with these developments, a sound commercial banking system and a flexible system of central bank control have been built up, while specialised institutions such as discount houses, merchant banks, accepting houses, the stock exchanges, investment trusts and finance corporations have evolved to satisfy particular needs for short-term or long-term finance (see pp. 435–41). The facilities provided by merchant banks and accepting houses, for example, have long been used to finance shipments of goods not only to and from Britain, but also between overseas countries themselves.

Commodity Markets

Britain is the traditional centre for marketing many of the world's basic commodities. Most of these markets were closed during the war but most, if not all, have now reopened and many have fully regained—some even surpassed—their previous position. Among the more important are the Baltic Exchange (the market for shipping and air transport, grain, seeds and vegetable oils), the London Commodity Exchange (cocoa, coffee, copra, hides and skins, rubber and sugar),

¹ It has been estimated that sterling is used as the currency of account for about 40 per cent of the world's international transactions.

the London Wool Exchange, the London Metal Exchange, the Liverpool Cotton Exchange and the Liverpool Corn Exchange. These markets not only cater for the import of goods for home consumption but do much business in effecting transactions between buyers and sellers in other countries. In addition to these formal markets, there is scarcely any product which cannot be traded through an intermediary in the United Kingdom. For example, London is the world's most important philatelic market and also the leading international centre for the sale of works of art.

The Foreign Exchange Market

The Foreign Exchange Market, which was closed during the war, was reopened for forward dealings in December 1951 and for arbitrage dealings in currencies of members of the European Payments Union in May 1953. The market is subject to United Kingdom exchange control regulations governing the purchase and sale of foreign currencies in the sterling area, but these regulations have been progressively relaxed in recent years.

The market consists of authorised banks and brokers linked together by telephone in the United Kingdom, and by telephone, telex and cable with overseas centres.

The London Gold Market

The London Gold Market, which had remained closed from the outbreak of war, was reopened on a restricted basis in March 1954, under the general supervision of the Bank of England. It has regained its pre-war position as the world's leading centre for dealings in gold.

Authorised dealers in gold are now free to deal with residents outside the sterling area against payment in any foreign currency, or in sterling held outside the sterling area, but residents of the sterling area have access to the market only as sellers, except where permission is given for the purchase of gold for essential industrial purposes and for the jewellery trade.

The Sterling System

As a result of Britain's early lead in international trade and finance, several countries tended not only to use sterling as their natural currency for international transactions, but also to maintain central currency reserves in Britain. When Britain abandoned the gold standard in 1931 these countries, which came to be known as the 'sterling bloc' and later as the 'sterling area', did likewise, and pegged their currency exchange rates to the pound sterling. In 1939, after the outbreak of war, the pound sterling was no longer freely convertible into other currencies and the sterling area became more formally defined as a currency area, for exchange control purposes. Within the sterling area the United Kingdom imposes virtually no restrictions on payments, whether in respect of current or of capital transactions.

All the Commonwealth countries (except Canada), together with Burma, Iceland, the Irish Republic, Jordan, Libya and the British protected states in the Persian Gulf are members of the sterling area. These countries contain one-quarter of the world's population and do one-quarter of the world's trade. The main feature of the sterling area is that the greater part of the overseas trade of member countries is financed in sterling; they keep their foreign reserves largely in the form of sterling and maintain a fixed relationship between their currencies and sterling. Member countries for the most part sell their foreign currency earnings in London in exchange for sterling and can purchase for sterling the foreign currency they require. They generally also sell gold in the London Market for sterling. The United Kingdom reserves of gold and foreign currencies are held in the Exchange

Equalisation Account, which buys and sells exchange in the market as appropriate, and is a large buyer of gold from the sterling area and elsewhere.

All these currency arrangements are voluntary; there are no strict or centralised rules of conduct, the Commonwealth member countries agreeing between themselves at periodic conferences the broad policies to be followed for the strengthening of sterling and of the reserves.

THE BALANCE OF PAYMENTS

Estimates of the United Kingdom's balance of payments are published half-yearly in White Papers, and in March 1959 a new publication, *United Kingdom Balance of Payments, 1946-57*, was issued, giving figures covering twelve years. These publications provide a summary of the whole range of the United Kingdom's transactions with other countries, classified by type of transaction and by area.

The transactions fall into three main groups—current account, long-term capital account and monetary movements. The balance on current account is composed of the balance of visible trade (i.e. the difference between merchandise imports and exports and re-exports) and the balance of invisibles (see pp. 449-51 and 461). On long-term capital account, the main groups of items are inter-Government loans (including amortisation) and other identified net long-term investment abroad by residents, or in the United Kingdom by non-residents. The third heading, monetary movements, reflects in part the United Kingdom's position as an international banker. It includes identified capital transactions not of a long-term character (e.g., changes in acceptances); changes in overseas sterling holdings and in Britain's credit or debit balance in the European Payments Union (which, since 30th December, 1958, has been superseded by the European Monetary Agreement); and changes in the central reserves of gold and convertible currencies.

Table 37 gives details of the United Kingdom's balance of payments in 1956, 1957 and 1958.

Balance of Payments in 1958

For 1958 as a whole, the United Kingdom had an unusually favourable balance of payments. On current account there was a credit balance of £455 million (£327 million in the first half-year and £128 million in the second half). Visible trade showed an exceptional surplus of £141 million in the first half-year and a small deficit of £21 million in the second; the change between the two halves of 1958 was due to a rise in the volume of imports and a fall in the volume of exports. The surplus on invisibles was also smaller in the second half-year (£149 million compared with £186 million); this was mainly accounted for by the debt service (interest and capital repayments) on the North American loans (see pp. 465-6), which was paid in full. The current surplus of £455 million in 1958 was counter-balanced partly by new long-term investment abroad and partly by an improvement in the United Kingdom's external monetary position. Thus, net long-term investment abroad (inter-governmental as well as private) amounted to £236 million, and the reserves of gold and convertible currencies rose by £284 million. There were also changes in the sterling holdings of overseas countries: holdings of countries outside the sterling area rose by £158 million, while holdings of sterling area countries declined by £82 million (largely on account of falls in commodity prices).

Trends in Earlier Years

The main balance of payments problem for Britain since the second world war has been to earn enough from exports, visible and invisible, (1) to pay for half

TABLE 37

UNITED KINGDOM BALANCE OF PAYMENTS

£ million

	1956	1957	1958 (provi- sional)	1957		1958	
				Jan.- June	July- Dec.	Jan.- June	July- Dec. (prov.)
<i>Current Account</i>							
Visible Trade (a)							
Imports (f.o.b.) ..	3,462	3,573	3,309	1,807	1,766	1,613	1,696
Exports and re-exports (f.o.b.)	3,407	3,515	3,429	1,782	1,733	1,754	1,675
Balance	- 55	- 58	+120	- 25	- 33	+141	- 21
Invisibles:							
Balance	+292	+321	+335	+139	+182	+186	+149
CURRENT BALANCE ..	+237	+263	+455	+114	+149	+327	+128
<i>Long-Term Capital Ac- count (b)</i>							
Inter-governmental ..	- 51	+ 72	- 46	- 18	+ 90	- 14	- 32
Other long-term capital	-200	-270	-190	-160	-110	- 90	-100
BALANCE	-251	-198	-236	-178	- 20	-104	-132
<i>Monetary Movements (b)</i>							
Overseas sterling holdings	+ 45	-175	+ 54	+ 64	-239	- 13	+ 67
Gold and convertible currency reserves ..	- 42	- 13	-284	- 51	+ 38	-287	+ 3
Other items	- 67	- 11	+ 23	- 30	+ 19	+ 47	- 24
BALANCE	- 64	-199	-207	- 17	-182	-253	+ 46
BALANCING ITEM (c) ..	+ 78	+134	- 12	+ 81	+ 53	+ 30	- 42

Source: *United Kingdom Balance of Payments, 1956 to 1958, Cmd. 700.*

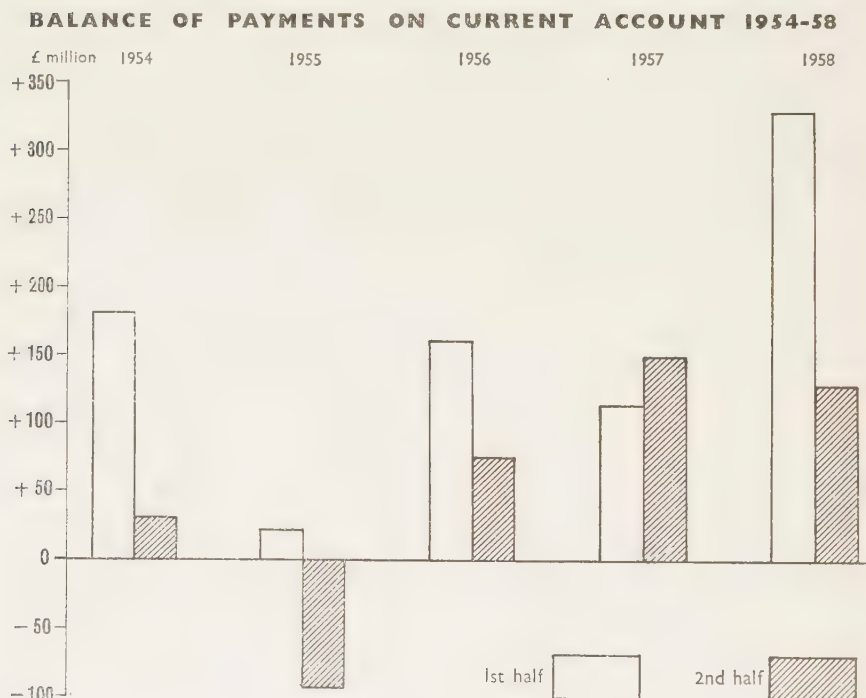
(a) The values of exports and imports shown in this table differ from those in the Trade and Navigation Accounts used in Table 31 (p. 445) because of differences of *coverage*, i.e. landings by British Whale Fisheries, trade with the Channel Islands, and exports to Services canteens (NAAFI) abroad are excluded from this table, but imports and exports of diamonds and all second-hand ships are included; and *valuation and timing*, i.e. broadly speaking, figures in this table represent earnings and expenditure, whereas the Trade Accounts record departures and arrivals. Charges for insurance and freight are, in general, here excluded from the value of imports.

(b) An increase of assets is shown by a minus sign and a decrease by a plus sign. An increase in liabilities is shown by a plus sign and a decrease by a minus sign.

(c) The balancing item is introduced to balance the account.

Britain's food and nearly all the raw materials used in its factories; and (2) to provide a balance of payments surplus in order to build up the gold and foreign exchange reserves needed in a world of multilateral trading and convertible currencies, and to meet obligations overseas, including foreign debt service, and obligations voluntarily accepted in respect of economic development in Commonwealth countries and elsewhere.¹

Between 1945 and 1951, the balance of payments on current account fluctuated widely owing to several factors, including changes in the terms of trade, the devaluation of the pound sterling in 1949, and the trade boom following the Korean War with its aftermath of high import prices. From 1952 onwards, there have been surpluses in each year except 1955. The diagram below shows changes in the balance of payments on current account from 1954 to 1958.



Regional Balance of Payments

Table 38 shows the balance of payments on current account with the main currency areas of the world, from 1946 onwards.

There is normally a triangular pattern of trade between the United Kingdom, the rest of the sterling area and the rest of the world. While the United Kingdom is usually in current deficit with the non-sterling world, the rest of the sterling area is usually in current surplus; on the other hand, within the sterling area, the

¹ In addition, since the war, the United Kingdom Government has had to meet heavy overseas military expenditure. In 1958, for example, this amounted to £181 million.

position is reversed and the United Kingdom normally has a current surplus with other sterling area countries.

In the early post-war years, the principal component in the United Kingdom's current deficit with the non-sterling world was the deficit with the dollar area. However, since 1951, this deficit has been considerably reduced—from an average of £307 million in 1946–51 to an average of £65 million in 1952–58; in 1958 there was, in fact, a dollar surplus of £56 million.¹

TABLE 38
UNITED KINGDOM REGIONAL BALANCE OF PAYMENTS
Current Account

£ million

Year	Rest of Sterling Area	Dollar Area (a)	Other Western Hemisphere Countries	OEEC Countries	Other Non-Sterling Countries	Non-Territorial Organisations (b)	Totals
1946	— 26	—299	— 24	+ 78	— 16	— 8	—295
1947	+128	—506	— 65	+ 1	+ 12	— 12	—442
1948	+256	—241	— 38	+ 79	— 40	— 9	+ 7
1949	+299	—291	+ 62	— 22	— 6	— 4	+ 38
1950	+283	— 79	+ 26	+104	— 32	— 5	+297
1951	+320	—427	+ 5	—209	— 99	— 9	—419
1952	+348	—166	+ 93	— 42	—	— 6	+227
1953	+152	+ 8	— 24	+ 72	— 15	— 14	+179
1954	+267	— 60	+ 8	+ 26	— 21	— 9	+211
1955	+214	—184	+ 2	— 54	— 45	— 6	— 73
1956	+301	— 13	+ 5	— 66	+ 17	— 7	+237
1957	+353	— 95	+ 25	— 24	+ 6	— 2	+263
1958(c)	+440	+ 56	+ 30	— 22	— 47	— 2	+455

Sources: *United Kingdom Balance of Payments, 1946 to 1957*, and *United Kingdom Balance of Payments, 1956 to 1958*, Cmnd. 700.

(a) The current balance with the dollar area does not include European Recovery Programme grants or United States and Canadian loans, but, from 1951 onwards, credit has been allowed for defence aid (net) as follows: 1951, £4 million; 1952, £120 million; 1953, £102 million; 1954, £50 million; 1955, £46 million; 1956, £26 million; 1957, £21 million; and 1958, £3 million.

(b) Including the United Nations Organisation and its specialised agencies, especially the International Monetary Fund (IMF) and the International Bank for Reconstruction and Development (IBRD).

(c) Provisional.

¹ The figures from 1951 onwards include defence aid (net) receipts from the United States (see footnote (a) to Table 38). Other important items on the credit side have been United States and Canadian armed forces' expenditure in Britain and offshore sales to the United States Government.

Reserves of Gold and Convertible Currencies

The reserves of gold and convertible currencies at the end of each year from 1945 to 1958 are shown in Table 39 and in the diagram below. At the end of August 1959, these reserves amounted to £1,160 million (\$3,248 million).

TABLE 39
RESERVES OF GOLD AND CONVERTIBLE CURRENCIES
(at end-December)

Year	£ million	Year	£ million
1945	610	1952	659
1946	664	1953	899
1947	512	1954	986
1948	457	1955	757
1949(a)	603	1956	762
1950	1,178	1957	812
1951	834	1958	1,096

Sources: *Annual Abstract of Statistics* and
Monthly Digest of Statistics.

(a) In September 1949 the £ sterling was devalued.

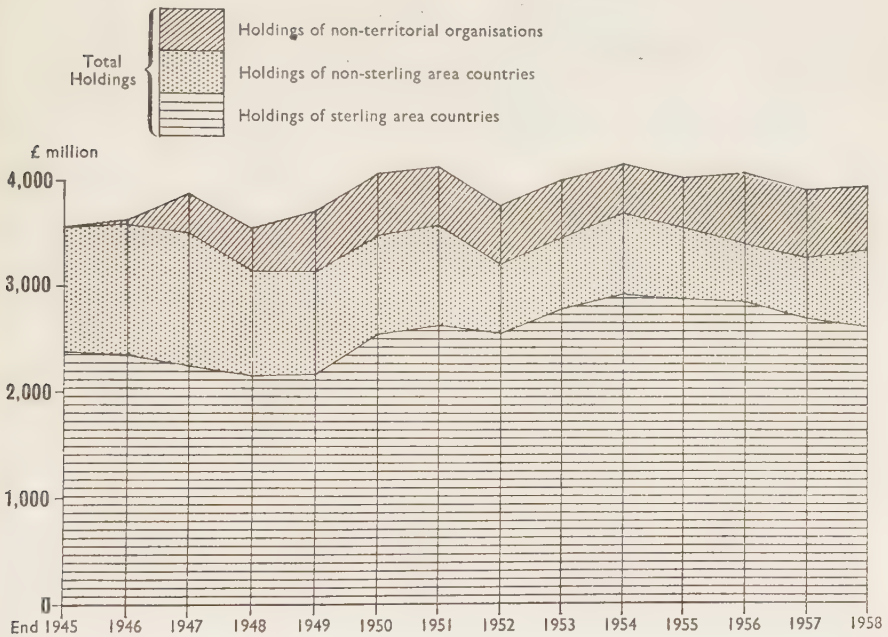
RESERVES OF GOLD AND CONVERTIBLE CURRENCIES 1945-58



A 'second line' of reserves is provided by the United Kingdom's drawing rights in the International Monetary Fund (IMF), to which Britain is the second largest contributor. In May 1959, the United Kingdom paid £58 million in gold to the IMF as part of the 50 per cent increase in its quota. As a result of the higher quota, the United Kingdom's drawing rights are increased by £232 million.

The diagram below shows trends in the level of overseas sterling holdings of sterling area countries, non-sterling countries and non-territorial organisations, from 1945 to 1958.

OVERSEAS STERLING HOLDINGS 1945-58



External Financial Aid received by Britain

Britain's difficulties in balancing its external accounts, particularly with the dollar area, in the immediate post-war years, were greatly alleviated by aid received from the United States and Canada.

In 1945, the United States extended to Britain a line of credit amounting to \$3,750 million, and a loan of \$650 million (later adjusted to \$622 million) in settlement of Lend-Lease and reciprocal aid adjustments arising out of the war. In 1946, Canada also extended a line of credit, amounting to \$C. 1,250 million, of which the United Kingdom drew \$C. 1,185 million. The terms of settlement with both countries provided for payment in 50 annual instalments, starting on 31st December, 1951, with interest at the rate of 2 per cent a year. The original loan agreements included provision for waiver of interest under certain circumstances. In March 1957, these were replaced by new arrangements whereby the United Kingdom Government could defer up to seven of the annuity payments of both capital and interest if it judged this postponement necessary in view of the current and prospective conditions of international exchange and the level of the reserves of gold and convertible currencies.

Between 1948 and 1951, Britain received in all \$2,700 million in Marshall Aid from the United States under the European Recovery Programme. Of this, \$1,700 million was grant aid, some \$620 million was 'conditional' aid (i.e. dollar aid on condition that Britain provided corresponding sterling aid to other European

countries) and \$337 million was a loan to be repaid with interest at 2½ per cent. By far the greater part of the Marshall Aid allocated to Britain was used to buy essential food and raw materials. But technical assistance and help in promoting intra-European trade co-operation were also provided.

After 1951, the financial aid received by Britain from the United States was mostly under the provisions of the United States Mutual Defence Assistance Programme and Mutual Security Programme. Between 1951 and 1958, net receipts by Britain amounted to \$1,184 million, including a loan of \$48 million repayable with interest at 2½ per cent. Mutual Defence Assistance allocations in 1950-51 totalled \$122 million, mainly for the purchase of machine tools. The Mutual Security grants of \$241 million in 1951-52 and \$369 million in 1952-53 were used chiefly to buy raw materials. After 1952, United States surplus agricultural commodities (mainly cotton, fruit and tobacco) were made available to the United Kingdom for payment in sterling; these funds were used by the United States to finance the purchase of military equipment (notably aircraft) in the United Kingdom. In 1956, the United Kingdom ceased to be allocated any Mutual Security Aid; it has, however, entered into small deals whereby purchases of fruit and tobacco for sterling have financed the building of houses, both in the United Kingdom and the West Indies, for use at nominal rents by the United States armed forces.

The Mutual Security Programme also assisted Britain's dollar balance of payments by the system of 'offshore procurement', under which the United States has placed contracts in Britain for military goods to be supplied to other NATO countries.

United States Private Investment in Britain

Since the war, the United Kingdom's economy has benefited from the expansion of United States corporate investment in Britain and the growth of licensing arrangements between United Kingdom and United States companies.

It has been estimated¹ that between 1950 and 1957 the total book value of United States direct investments in Britain rose from \$847 million to \$1,899 million, representing half the total United States direct investment in Western Europe over the period. The 1957 total included \$394 million in petroleum refining and distribution and \$1,201 million in manufacturing industry (chiefly motor vehicles and equipment, machinery, electrical appliances, chemicals, metals and food products). Much of this investment is in expanding industries such as agricultural tractors, earth-moving equipment and office machinery. This investment by United States industrial firms has enabled the British economy to acquire some new techniques and to make considerable savings in imports and at the same time to expand its exports of several important products.

North American investors are also allowed to repatriate the proceeds of the sale of these investments, including any capital gains that may have accrued, provided that the investment was made after 1st January, 1950. Portfolio investment (e.g., by purchase, on a stock exchange, of securities in United Kingdom companies) by United States citizens has also increased markedly since 1957.

UNITED KINGDOM FINANCIAL AID TO OTHER COUNTRIES

For well over a hundred years the United Kingdom has been a major supplier of external finance for other countries; up to the first decade of the twentieth century it was the foremost supplier of private long-term capital. Since the second world

¹ United States Department of Commerce's *Survey of Current Business*, September 1958.

war, despite economic difficulties, the United Kingdom has made available to other countries very large sums in the form of grants and loans for relief, rehabilitation, development and other economic purposes; between 1945 and 1958, the United Kingdom expended over £5,000 million gross for these purposes.

In recent years, United Kingdom finance for overseas development has been made available through private sources, public funds and intergovernmental organisations. The greater part of such finance goes to Commonwealth countries (including Colonial territories) and consists of private funds. There has also, however, been substantial direct or indirect Governmental assistance to Colonial territories and to under-developed countries inside and outside the Commonwealth.

All the countries of the sterling Commonwealth except the United Kingdom are net importers of long-term capital and look to the United Kingdom for a substantial proportion of their external capital requirements. The sources and availability of capital for development are therefore regularly considered at Commonwealth Economic Conferences and Meetings. At the Commonwealth Conference in Montreal in September 1958, special emphasis was placed on the needs of the less developed countries of the Commonwealth and the conference recognised that the Commonwealth has a collective responsibility to do what it can to promote development in those areas.

Since the United Kingdom imposes no exchange control on current transactions or capital payments with other sterling area countries, there are no precise figures of total United Kingdom finance made available overseas. Balance of payments figures show, however, that the net level of United Kingdom private investment in all areas has been some £200 million a year in recent years. The gross outflow of new funds has, however, been much larger.

From 1952 to 1958, the gross outward flow is estimated to have averaged £330 million a year, while the inward flow averaged £130 million. Nearly two-thirds (£210 million) of the outward flow went to the sterling area and only £20 million of the inward flow came from it. The net investment was thus almost entirely in the sterling area. Private capital exports of about £120 million a year outside the sterling area, mainly to Canada, were offset by capital imports, mainly from the United States, of about £110 million. About half of the net flow of United Kingdom private investment is estimated to have gone to under-developed countries. In addition, non-military loans and grants from the United Kingdom Government to such countries have been on an increasing scale. In 1958-59, these amounted to about £115 million (including disbursements of £19 million from the United Kingdom sterling subscription to the International Bank for Reconstruction and Development, IBRD), of which about half was in outright grants, largely to United Kingdom dependencies. The total of the United Kingdom's net financial contribution to the development of under-developed countries in 1958-59 was therefore about £215 million.

Private Finance

Private investment abroad may take several forms; the raising of loans on the London capital market; direct investment; the establishment of subsidiary companies; the ploughing back of profits earned overseas; and participation, jointly with domestic capital, in enterprises overseas.

London Market Borrowing

Because of the heavy demand for such funds, borrowing by overseas Governments on the London capital market since the war has normally been confined to issues by Commonwealth and Colonial Governments.

Borrowing by Commonwealth and Colonial Governments on the London market during the last few years (excluding refinancing and conversion issues) is shown in Table 40.

TABLE 40
BORROWING ON THE LONDON CAPITAL MARKET

	1955	1956	1957	1958
Colonial Governments (a)	9.7	11.2	15.5	5.0
Other Commonwealth Governments..	10.0	5.0	0.0	45.0
TOTALS	19.7	16.2	15.5	50.0

£ million

Source: Central Statistical Office.

(a) Includes reservations for local subscriptions and Crown Agents' subscriptions.

Other Private Investment

The United Kingdom imposes no restriction on investment in the sterling area by United Kingdom firms. Such investment is frequently made from a firm's existing resources. If, however, the investing firm raises the necessary finance by borrowing in the United Kingdom, it must normally obtain the consent of the Treasury (which is advised by the Capital Issues Committee) to this borrowing if the amount so borrowed exceeds £50,000 in any one year. In 1954-57, approvals for applications to issue capital destined for sterling Commonwealth countries averaged over £50 million a year. Finance is also made available by the Commonwealth Development Finance Company (see p. 440), which, by March 1959, had entered into commitments totalling £15.5 million in eight Commonwealth countries for a wide variety of projects.

Finance from Public Funds

There are several public sources of finance from which United Kingdom funds are made available for overseas development. The following are the principal forms of machinery through which funds are provided.

Export Guarantees Acts

The Government has authority under Sections 2 and 3 of the Export Guarantees Act, 1949, as amended by Section 2 of the Export Guarantees Act, 1957, for the giving of economic assistance to countries outside the United Kingdom. Securities issued by the borrowing country are acquired by the Export Credits Guarantee Department (ECGD), and their purchase price used to facilitate payment for United Kingdom exports.

United Kingdom Government loans are made through these powers to overseas Governments. The loans bear interest at rates related to the notional rates for United Kingdom Government borrowing.

From 1949 to 1958, loans have been effected through ECGD to Yugoslavia (£17 million); India (£43.5 million); Iran (£10 million); Pakistan (£10 million); and Iraq (£3 million). Loans to Yugoslavia (£3 million), Pakistan (£10 million), the Sudan (£5 million), and India (£3 million), were arranged early in 1959.

Colonial Development Corporation

The Colonial Development Corporation is a public corporation set up in February 1948. Its purpose as re-defined in the Overseas Resources Development Act, 1956, is to assist Colonial territories, in accordance with the provisions of the Overseas Resources Development Acts, 1948 to 1958, in the development of their economies. For this purpose the corporation has power to undertake in Colonial territories, either alone or in association with others, projects for the promotion or expansion of a wide range of enterprises specified in the Overseas Resources Development Act, 1956.

The Act empowers the corporation to borrow, in order to carry out its functions, so as to have outstanding at any one time not more than £150 million on a long-term and medium-term basis, and £10 million on a short-term basis. The Secretary of State for the Colonies, with the consent of the Treasury, is empowered to make Exchequer advances to the corporation, and the amounts which are permitted to be outstanding at any one time may not exceed £130 million long-term and medium-term advances and £10 million short-term advances. Up to the present, most of the corporation's loan capital has, in fact, been obtained from the United Kingdom Exchequer.

At the end of 1958, the corporation reported that it had 77 continuing projects, representing a total capital commitment of over £82 million. They were divided up as follows: utilities (power, transport, communications, housing) 51.8 per cent; primary production (agriculture, minerals, forestry) 32.9 per cent; processing and manufacture (factories, animal products) 15.3 per cent.

Colonial Development and Welfare Acts

The United Kingdom has made available, under the Colonial Development and Welfare Act of 1945 and subsequent Acts, £220 million for planned development and welfare in its Colonies for the period ending 1960. Under the Colonial Development and Welfare Act, 1959, a further £95 million will be provided for the period 1959-64 for the continuation of assistance on the existing basis. The Act also provides for additional loans of up to £100 million in the same period; the maximum amount for any one year must not exceed £25 million. In the financial year 1958-59, £18.6 million was issued in the form of grants and loans from these sources; such financial assistance is used by the Colonies to supplement development expenditure from their own resources and from market borrowing.

Other Government Sources

United Kingdom Government funds are also made available for overseas purposes in other ways than those mentioned above, e.g., grants and loans to assist the administrations of certain Colonial territories; in special circumstances, direct financial assistance (other than loans under the Export Guarantees Acts) is provided for independent Commonwealth and Foreign Governments—examples are Malaya and Libya.

United Kingdom Aid through Intergovernmental Organisations

The principal intergovernmental organisations through which the United Kingdom provides aid to other countries are the International Bank for Reconstruction and Development (IBRD) and its affiliate, the International Finance Corporation (IFC), the United Nations Expanded Programme for Technical Assistance and Special Fund for Technical Assistance, and (through private and public channels) the Colombo Plan.

The object of IBRD, which was founded in 1946, is to supplement other sources of Government and private credit for investments in sound projects for the

economic development of its member countries. The United Kingdom's subscription to IBRD is the second largest of any country, amounting to the equivalent of \$1,300 million.

In accordance with the rules of IBRD, 2 per cent (about £9 million) of this subscription has been paid in gold and dollars and is freely available for IBRD to lend to any country, while 18 per cent (about £84 million) has been paid in sterling and can be lent by IBRD only with the United Kingdom's permission. In fact, the United Kingdom has given permission for £4 million of this to be lent to any member country, and for the remaining £80 million to be lent to Commonwealth countries; it is expected that all but about £10 million of the 18 per cent subscription will have been disbursed by about the end of 1960. Repayments on loans financed in this way may be re-used by IBRD for fresh lending, thus constituting a revolving fund. In addition, IBRD has also been allowed to borrow £10 million on the London capital market.

The remaining 80 per cent of IBRD subscriptions is not paid up but is subject to call if required to enable IBRD to meet its obligations as borrower, thus serving as a guarantee for the funds which IBRD raises from the world's private capital markets and which it uses to finance its lending operations.

In February 1959, the Government took legislative action, in accordance with recommendations by the executive directors of IBRD to member countries, to double its subscription to IBRD. It is intended that the whole of these additional subscriptions should remain subject to call, thus strengthening the guarantees behind IBRD's market borrowings.

The United Kingdom is also the second largest contributor to IFC,¹ subscribing 15.4 per cent of its total subscribed capital of \$93.3 million. In addition, the United Kingdom has contributed over £5 million to the United Nations Expanded Programme of Technical Assistance² and has agreed to contribute \$1 million towards the resources of the United Nations Special Fund³ during its first year (1959).

Colombo Plan

The Colombo Plan for Co-operative Economic Development in South and South-East Asia had its origin in, and took its name from, the meeting of Commonwealth Foreign Ministers held at Colombo in January 1950. It is designed to provide a framework within which a co-operative effort can be made to raise the area's standards of living and to undertake economic development.

United Kingdom disbursements under the Colombo Plan (not including the sterling releases above) from its inception to June 1958 amounted to £92½ million. This figure comprises aid given under the Colonial Development and Welfare Acts, and from the Colonial Development Corporation to Malaya, North Borneo and Sarawak; technical assistance; ECGD credits; and releases from the United Kingdom's sterling subscription to IBRD, in the shape of loans for approved projects in Commonwealth countries. These IBRD sterling loans amounted to about £21 million at 30th June, 1958. In addition to the £92½ million disbursements mentioned, some £31 million from the United Kingdom stood committed at 30th June, 1958.

¹ IFC was set up as an affiliate of IBRD in 1956 to assist the growth of private enterprise in member countries.

² The object of this programme is to provide under-developed countries with expert advice and training facilities over a wide field.

³ The object of the fund is to extend the scope and resources of the existing technical assistance and development programmes of the United Nations.

The United Kingdom undertook, at the Colombo Plan Consultative Committee meeting at Seattle in November 1958, to increase the amount of technical assistance to be provided up to 1963 from £7 million to £9 million.

INTERNAL TRADE

The internal trade of the United Kingdom can be divided into two broad categories: trade in raw materials, capital goods and intermediate products (for example, vehicle components) and trade in consumer goods, that is to say goods for direct sale to the public. (The pattern of consumers' expenditure is outlined in Chapter VIII, *The National Economy*, see p. 247.)

The 1957 Census of Distribution, which was a large-scale sample inquiry, provides an account of the structure of the retail trade. The full Census of Distribution, relating to the year 1950, also covered wholesaling and the catering and other service trades, and provides a comprehensive picture of the distributive trades as a whole. It also included more detailed information on the retail trades than was given in the 1957 census. Both censuses covered Great Britain but not Northern Ireland.

WHOLESALE TRADE

On the basis of some pre-war researches,¹ it would appear that about 17 per cent of sales were made to consumers through producers' own selling organisations, including their own retail outlets and mail-order businesses, while more than 40 per cent were accounted for by direct sales by producers to retailers; and it is estimated that approximately a further 40 per cent of sales move through wholesale channels.

These channels are most in evidence in the distribution of textiles, agricultural produce and foodstuffs. The 1950 Census returns, which covered about 92 per cent of all wholesalers, showed a total employment of about 800,000 in wholesaling. Out of a total of some 55,700 wholesale establishments, there were about 7,000 in the clothing, footwear and textile trades, 6,900 in the groceries, confectionery and drink trades and 6,900 in other food trades.

Methods of wholesale distribution vary according to the type of merchandise handled. Fresh fish, for example, is auctioned at the ports to port wholesalers who sell to inland wholesalers at the main distribution centres or, in some cases, direct to retailers; fruit and vegetables, on the other hand, may be sold by growers to commission agents who dispose of the produce either to wholesalers or direct to retailers, or alternatively the grower may deal only with wholesale firms.

London's wholesale markets are of outstanding importance in the distribution of foodstuffs, particularly imported supplies. Covent Garden handles about £70 million worth of fruit, vegetables and flowers each year; about 8,000 tons of meat pass through Smithfield market each week; Billingsgate (see p. 292) is the principal distributing centre in Britain for fish. Other markets in London include those at Leadenhall (poultry) and Spitalfields (fruit and vegetables).

Voluntary wholesale chains, that is to say independent retailers linking themselves to a single wholesaler or a group of wholesalers and so gaining some of the advantages of large-scale trading without losing their independence, have developed quite rapidly in the grocery trade since 1954. As yet, however, they account for only a small but growing proportion of grocery business.

¹ An indication of the general pattern of wholesale trade before the war is given in some unofficial pioneer studies, for example, *The Distribution of Consumer Goods*, by James B. Jefferys, published in 1950.

RETAIL TRADE

Types of Retail Shops

Retail shops in Britain may be classified under four heads: (1) retail co-operative societies; (2) department stores with a number of departments selling different types of goods (in some cases a firm may own several department stores); (3) multiple traders, that is organisations, other than co-operative societies or department stores, with ten or more branches; and (4) independent retail businesses and branches of small multiple stores (i.e. chains of stores with nine or fewer branches). In addition, there are a number of market and street traders, but according to the 1950 Census of Distribution, the amount of business done by these traders is usually very small; their average turnover was less than £2,000 per year. Table 41 shows the shares of the four main groups of retail business in total turnover in 1957.

TABLE 41
TURNOVER OF MAIN GROUPS OF RETAIL BUSINESS IN 1957

Main Groups	£ million	Percentage
Retail co-operative societies ..	905	11.6
Department stores	381	4.9
Multiple traders	1,902	24.4
Independent retail businesses ..	4,610	59.1
TOTAL RETAIL TRADE ..	7,798	100.0

There are a large number of small undertakings; the 1950 Census recorded 246,000 businesses with an annual turnover of under £5,000. Most of the smaller undertakings have working proprietors; out of the 2.7 million persons engaged in the retail trade in 1957, 590,000 were working proprietors and unpaid family helpers. Out of a total of some 574,000 establishments shown by the 1957 Census, and recorded in Table 42, grocery and other food retailing groups numbered nearly 276,000 establishments, and the clothing and footwear group some 94,000.

Present Trends in Retail Trade

In recent years, multiple concerns and the retail co-operative societies have succeeded in raising their sales relative to those of other groups. The 1957 census showed that multiple retailers succeeded in raising their turnover by 71 per cent between 1950 and 1957, while the corresponding increases for co-operative societies and independent traders were 58 per cent and 46 per cent, respectively. Sales by department stores trading in 1950 increased by 27 per cent between 1950 and 1957, and there was also an increase in the number of department stores over the period.

Trends since 1957 are shown by the monthly statistics of retail trade compiled by the Board of Trade. In 1958, the increase in retail sales was about 3 per cent, which is considerably below the annual rate of growth since 1950. Since the removal of hire-purchase restrictions, the growth in the value of retail sales has been most marked in food shops (partly reflecting the higher than average rise in food prices) and in sales of radio and electrical goods.

TABLE 42
RETAIL AND SERVICE TRADES, 1950 TO 1957

	Number of Establishments		Turnover		Percentage change in turnover
	1950	1957	1950	1957	
			£ million	£ million	Per cent
Total Retail Trade	579,813	573,988	5,100	7,798	+53
Grocers and provision dealers	140,559	149,109	1,232	2,041	+66
Other food retailers	143,896	126,777	1,006	1,565	+56
Confectioners, tobacconists, newsagents	74,613	77,440	503	703	+40
Clothing and footwear	96,247	93,556	932	1,151	+23
Household goods	65,062	64,906	571	888	+56
Other non-food retailers	57,771	58,487	385	578	+50
General stores	1,665	3,713	471	872	+85
Service Trades					
Boot and shoe repairers	18,467	14,458	19	23	+19
Hairdressers	33,113	34,458	38	62	+64

Source: Board of Trade.

Self-Service Shops and Mobile Shops

The development of self-service in retail establishments since 1950 has probably helped the multiple stores and the retail co-operatives to achieve a higher rate of expansion in sales. Unofficial estimates give the number of self-service shops in operation in the United Kingdom at the end of April 1959 as over 5,000, and new self-service outlets are being established at the rate of some 800 a year. About 60 per cent of these shops are thought to be owned by retail co-operative societies and the majority of the remainder by multiple stores. On the basis of returns provided for the 1957 census of distribution, the Board of Trade has estimated that their total turnover in that year exceeded £200 million. There has probably been an appreciable increase since then. Self-service shops as a whole are now estimated to be responsible for about 15 per cent of retail sales in the grocery and provision trade, but for other types of merchandise the proportion is insignificant.

Supermarkets, which may be broadly defined as self-service shops with a selling area of more than 2,000 square feet, have been operating since 1956 in the United Kingdom. By the middle of 1958, about 175 had been opened, nearly one-half of them in or around the London area. Co-operative societies own nearly half of the supermarkets, and multiple stores about two-fifths.

There has also been a large increase in the number of mobile shops serving outlying housing estates and rural areas. Some 8,000 mobile shops, about half of which are owned by retail co-operative societies, are estimated to be in operation, the majority selling groceries or other foodstuffs; several manufacturers specialise in building fully equipped vehicles for this type of trading.

Mail Order Sales

Retail sales amounting to £128 million were reported by specialist mail order houses, and some manufacturers and large stores also sell by mail order. The twenty largest companies account for about 85 per cent of total mail order sales; the bulk of their trade consists of clothing, footwear and household textiles. The smaller mail order businesses normally specialise in a single commodity, notably in the sale by post of seeds, plants and small horticultural requisites.

Retail Co-operative Societies

The retail co-operative societies are voluntary non-profit-making organisations engaged in the retail trade and controlled by their members who are also their customers. An operating surplus is returned periodically to members as a dividend, and the amount distributed is proportionate to the value of the member's purchases over the period.

Retail co-operatives also sell to the general public, but membership is open to anyone paying a small deposit on a minimum share, which entitles the member to an equal voice with other members in determining the policy of the society. Investment by individual members is limited to £500 but the rules of some societies may fix lower limits. Only a low rate of interest is paid on the shares.

At the end of 1957, there were 1,045 retail co-operative societies registered under the Industrial and Provident Societies Act, but amalgamations are slowly diminishing the number of societies. More than a quarter of the total membership of the co-operatives (12,148,000, an increase in the two years from 1955 to 1957 of 542,000) was provided by the eleven largest societies, each of which had a membership of more than 120,000. One, the London Co-operative Society with about 1.3 million members, is the largest retail co-operative in the world. Total sales of the retail co-operative societies in 1957 reached £954 million, the largest having a turnover of more than £50 million, and of the total trading surplus, £51 million was allocated to dividends on sales.

Retail co-operative societies are free to purchase where they wish or to produce their own goods, but in order to secure the advantages of large-scale production and distribution, they have collectively established wholesale and production societies.¹

The report of an independent commission, set up by the Co-operative Union to survey the whole field of co-operative production and marketing, was published in 1958. Its recommendations, which have not yet received the approval of all branches of the movement, include the amalgamation of smaller societies, improvements in the management structure, the setting up of national chains of specialist shops through a new organisation, and the concentration of the productive effort of the wholesale co-operative societies on a narrower range of goods.

Hire-Purchase Sales

The rapid growth of sales of household and durable consumer goods, such as cars, furniture, washing machines, refrigerators and cookers, has been greatly facilitated by the development of instalment purchasing. In February 1955, the Government had imposed restrictions, in the form of minimum initial payments and maximum periods for repayment, on hire-purchase and credit transactions; in October 1958, however, these controls were lifted completely, and this led to a sharp rise in the volume of outstanding hire-purchase and other credit instalment debt.

¹ The two major wholesale societies are the Co-operative Wholesale Society Limited and the Scottish Co-operative Wholesale Society Limited.

After an advance of about £60 million to a total of £469 million in the year to June 1958, there was a further increase to £559 million by the end of 1958, and to about £708 million by the end of June 1959. About one-third of the total debt was owed in respect of purchases of new and second-hand cars.

The Board of Trade compiles, on a sample basis, monthly returns of hire-purchase sales and other instalment credit for durable goods. These showed that in the final quarter of 1958, following the ending of controls, about half the sales of furniture shops and also of the shops selling radios and electrical goods, and about 30 per cent of the sales of cycle shops, were in the form of instalment purchases.

There are numerous finance companies which specialise in providing finance for credit transactions. At the end of 1958, such companies were carrying about £333 million of direct hire-purchase debt. The remainder is either financed by the retailer entirely or subsequently discounted for him by a finance company. The twelve largest of these companies account for about 70 per cent of the total finance provided.

Packaging

The British Productivity Council has estimated that British industry spends not less than £400 million annually on packaging, an increase of one-third in the past decade. The expansion of self-service shops and the growth of sales in the form of branded and standardised products have been major factors in the great changes which have taken place in packaging methods. These developments are reflected in the marked increases in output of the industries concerned—plastics, fibreboard, metal tubes, tin plate and glass containers. Fruit and vegetables, for example, are increasingly sold in packs of transparent film—estimated to number about 200 million in 1958. Aerosol dispensers, almost unknown a few years ago, are being used at a rate of over 10 million a year. Laminated aluminium foil is now employed extensively as a wrapping material in the food industry. A Packaging Centre has been set up in London to provide information on packaging methods.

Advertising

The expansion of productive capacity in industries manufacturing consumer goods in Britain, and the ever-increasing choice of goods and services available to the consumer in recent years, have been accompanied by a steady upward trend in expenditure on advertising. About £375 million is estimated¹ to have been spent on all forms of advertising in 1958. Over £100 million was expended on advertising in the national and provincial press and about three-quarters of that sum in periodicals and magazines and in the technical and trade press, as well as about £50 million on television advertising (about three times as much as in 1956). The remainder was divided between other media, such as posters, films, catalogues, window displays and exhibitions. Most of the advertising is carried out by advertising agencies, which, in some cases, also provide marketing, consumer research and other services. The central organisation of the profession is the Institute of Incorporated Practitioners in Advertising.

Consumer Protection

Various legislative measures exist in the United Kingdom to protect the consumer against specific abuses. Independent organisations have also sought to establish voluntary minimum standards of quality.

¹ This figure is derived from estimates given by Mark Abrams in *Advertising: A Financial Times Survey*, issued in June 1959.

The Merchandise Marks Acts, 1887-1953, are designed to ensure that the marking of goods is both accurate and honest. Weights and measures legislation, one of the earliest forms of consumer protection, is strictly enforced by qualified inspectors. In establishing standards for consumer goods, the *British Standards Institution* (see p. 262) is providing valuable services, and the Council of Industrial Design (see p. 225) helps to foster improvements in the design of consumer goods. Advice to the public on the merits of consumer goods and services is provided through the British Standards Institution's Consumer Advisory Council, with a membership of over 50,000, and the Consumers' Association Ltd., a private body financed by the subscriptions of members who number over 125,000. Assistance with certain aspects of consumer guidance is also given by a number of other private bodies and by certain Government departments, e.g., the Department of Scientific and Industrial Research. Special arrangements, in the form of consumer councils and consumer committees, have been made for the nationalised industries. Individual trades and industries have also taken measures to raise standards of quality.

The purity, hygiene and description of food are controlled by the Food and Drugs Acts, 1955, 1956, and 1958 (see p. 146).

A committee was set up by the President of the Board of Trade, in the summer of 1959, to consider and report whether changes in the law and other measures are desirable for the further protection of the consumer.

XIV. SOUND AND TELEVISION BROADCASTING

Broadcasting of sound and of television in the United Kingdom is regulated under powers conferred on the Postmaster General by the Wireless Telegraphy Acts, 1949–1955, which prohibit the sending or receiving of radio communications, except under licence. Users of sound and television receiving sets must obtain an annual licence, which can be purchased from most post offices.

Sound broadcasting services are provided solely by the British Broadcasting Corporation (BBC), which was established as a public corporation by Royal Charter in 1927. Television services are provided by both the British Broadcasting Corporation and the Independent Television Authority (ITA), which was established by the Television Act, 1954.

The number of receiving licences current in the United Kingdom at the end of June 1959 was 14,847,483, of which 9,495,188 were for sound and television combined, and 5,352,295 (including 393,464 for sets fitted in cars) for sound only. A combined sound and television licence costs £4 (including £1 excise duty); a sound only licence costs £1. Registered blind people are entitled to free sound licences or to £4 combined licences for £3. One licence covers all receiving sets in a household, but a separate licence is required for a set fitted in a car.

Broadcasting Authorities

When sound broadcasting began in the United Kingdom in 1922, it was decided in Parliament that the Postmaster General should grant only one licence for that purpose at any one time, and the first licence was granted exclusively to a limited company (the British Broadcasting Company). The decision to grant only one licence for broadcasting was maintained when the British Broadcasting Corporation (BBC) was formed to take over the functions of the limited company in 1927; it was reaffirmed in 1937 when the BBC's second Charter was granted to cover the sound services and the television service which the BBC had inaugurated during the previous year; and it was upheld throughout the second world war and during the post-war period until 1952.

During the second world war, television broadcasting was suspended and transmissions were not resumed until 1946. After resumption, however, the television service gained rapidly both in technical efficiency and in popularity; and between 1949 and 1952 the Government instituted a major review of sound and television broadcasting which aroused great interest in Parliament, in the press and among the public. After prolonged parliamentary and general discussion it was decided by the Government that the potential power of television was so great that it would be undesirable to leave transmission services in this medium in the hands of a single authority, however excellent. The Independent Television Authority was therefore established in 1954 to provide services additional to those of the BBC for an initial period of ten years; and independent television transmissions began in September 1955—the BBC's monopoly in the provision of sound broadcasting services remaining undisturbed.

Both the BBC and the ITA are independent authorities in so far as daily administration and presentation of programmes are concerned. The Government, how-

ever, retains ultimate control, and the Postmaster General, as the responsible minister, is answerable to Parliament on broad questions of policy. The Postmaster General may issue directions to the BBC and to the ITA on a number of technical and other subjects; and he has power to prohibit their broadcasting any particular matter or class of matter, or to revoke their Licences at any time. Both the BBC and the ITA are required to publish annual reports and accounts, which are presented by the Postmaster General to Parliament.

The BBC and the ITA both consult with the Postmaster General as to the hours of television broadcasting, and he has approved an arrangement which permits a maximum of 50 hours a week, together with extensions (averaging ten hours a week) for certain stated purposes, such as religious broadcasts, ministerial and party political broadcasts, schools broadcasts, outside broadcasts and Welsh language broadcasts. The authorities may broadcast television programmes, within the prescribed maxima, during any periods best suited to the needs of their audiences. The BBC broadcasts in all four of its domestic sound services for some 18 hours out of the 24.

Organisation and Finance

The BBC operates under the provisions of two documents, each granted for limited periods at the end of which they may be renewed or amended: the Charter, which sets out the constitution, objects and internal organisation of the BBC and contains certain financial provisions; and the Licence and Agreement between the BBC and the Postmaster General, which deals with technical matters, certain non-technical conditions such as the prohibition of commercial advertisements and sponsored programmes, and details of the financial arrangements in force. The operations of the ITA are governed by the provisions of the Television Act, 1954, which formulate its constitution, its functions, its purpose and the framework of its finances; and by the Licence (which contains technical provisions) issued to it by the Postmaster General in 1955.

The British Broadcasting Corporation

Under the current Charter (which came into force in 1952 and expires in 1962) the corporation consists of nine governors (including a chairman, a vice-chairman and separate national governors for Scotland, Wales and Northern Ireland) each appointed for a period of not more than five years by the Sovereign in Council. As a corporate body, the governors are responsible for the conduct of the whole broadcasting operation, including the content and presentation of the programmes in sound and television, and the provision and working of the necessary installations and equipment.

In the discharge of its responsibilities, the BBC is required to ensure that its services are used, as stated in the preamble to the Charter, 'as a means of disseminating information, education and entertainment', to pay heed to the requirements of the Licence (e.g., it must allow the broadcasting of any announcement at the request of a Government department, and it must strictly exclude commercial advertisements in any form from its programmes), and to refrain from formulating or allowing the expression of editorial opinion, since to express such opinion would be to depart from the rule of impartiality which the BBC is expected to observe in current affairs and matters of public issue.

The governors are advised on all aspects of their work by a number of councils, established in accordance with the terms of the Charter, e.g., the General Advisory Council, which has been in existence, except for a break during the war years, since 1934; the National Broadcasting Councils for Scotland and Wales,

which, under the chairmanship of the national governors for Scotland and Wales, are responsible for the domestic sound services in those countries; and the Regional Advisory Councils for the English regions and for Northern Ireland. There are also a number of other councils and committees, not specifically required by the Charter, but established by the BBC to advise on such matters as religious broadcasting, schools broadcasting, music and agriculture.

The chief executive officer of the BBC is the Director-General, who is appointed by the governors at their discretion and with whom they discuss all major matters of policy and finance. Under the Director-General are eight directors (the Chief Assistant to the Director-General, and the Directors of Sound Broadcasting, Television Broadcasting, News and Current Affairs, External Broadcasting, Engineering, Administration, and Staff Administration) who, between them, cover the whole work of the BBC, and who, with the Director-General, constitute its Board of Management. The number of staff employed in 1959 was approximately 16,110.

The services of the BBC are financed from (1) an annual sum, voted by Parliament, which is related to revenue derived from the sale by the Post Office of broadcast receiving licences; (2) an annual grant-in-aid, voted by Parliament, for the External Services, i.e. the European Services, the Overseas Services, and the Monitoring Service; and (3) profits from BBC publications, mainly the *Radio Times*, which has a weekly sale of about 8 million copies and attracts a large advertising revenue. The gross revenue from the sale of licences for the year ended 31st March, 1959, amounted to £33,350,545, excluding the excise duty which is not regarded as part of the income from licences and is not available to be spent on broadcasting.

It was agreed with the Postmaster General that, for the period 1st April, 1957, to 31st March, 1960, the Treasury should retain $12\frac{1}{2}$ per cent of the net revenue from the sale of licences, i.e. the gross revenue, less a sum deducted by the Post Office equal to the actual expenses it incurs in collecting the licence fees, investigating complaints of interference and rendering other services, and the cost of administration. In 1958-59, the Post Office deducted £2,124,128 from the gross licence revenue, the Treasury retained £3,903,302 of the net licence revenue, and the BBC received a net licence income of £27,323,115. In the same year, the net revenue from publications was £1,144,578, and grant-in-aid receipts amounted to £6,178,000. Under an arrangement by which additional sums may be paid to the BBC if, on application by the BBC to the Postmaster General, the Treasury is satisfied that the BBC's income is insufficient for the adequate conduct of home broadcasting during any portion of the term of the Licence, the sum to be retained by the Treasury for the year 1959-60 has been reduced to $7\frac{1}{2}$ per cent, thus increasing the BBC's share of the net licence revenue for that year from $87\frac{1}{2}$ per cent to $92\frac{1}{2}$ per cent.

The Independent Television Authority

The Independent Television Authority consists of a chairman, a deputy chairman and eight ordinary members (three of whom have special responsibility for Scotland, Wales and Monmouthshire, and Northern Ireland severally) appointed by the Postmaster General. The ITA owns and operates the transmitting stations, but the production studios and equipment are owned, and the actual programmes are provided, by commercial programme companies under contract to the ITA. These companies pay the ITA for the right to present programmes, which may include advertisements. The ITA is, however, required by the Television Act to satisfy itself that the programmes maintain certain standards—e.g., it must ensure that they do not offend against good taste or decency, that they are balanced in their subject matter, that they preserve due impartiality in presenting matters of

industrial or political controversy, and that the news is reported accurately. The ITA therefore has controlling and regulatory powers of a wide and important character in regard to programmes and advertisements, as well as the task of choosing the programme contractors and drawing up the contracts under which they are to operate.

In the discharge of its duties, the ITA is advised by three statutory committees: the Advertising Advisory Committee, the Children's Advisory Committee, and the Central Religious Advisory Committee, which by arrangement with the BBC acts as the statutory advisory body to the ITA on religious broadcasting. The ITA has also appointed a panel of five consultants to assist it in the exercise of its day-to-day responsibilities for religious services and programmes.

The chief executive officer of the ITA is the Director-General. There is also a Deputy Director-General, and a headquarters staff covering all technical, administrative, clerical, typing and office services, which numbered 118 in June 1959. Staff has also been recruited for the transmitting stations and for regional offices, bringing the total number of ITA staff to some 363. Ten programme companies are under contract with the ITA: Associated-Rediffusion Limited; Associated TeleVision Limited; ABC Television Limited; Granada TV Network Limited; Scottish Television Limited; Independent Television for South Wales and the West of England Limited (TWW Ltd.); Southern Television Limited; Tyne-Tees Television Limited; Anglia Television Limited; and Ulster Television Limited. A common news service is provided by Independent Television News Limited. A standing consultative committee, composed of two representatives of the ITA and a representative of each of the programme companies, provides consultative machinery between the ITA and the companies on matters affecting the companies as a whole. There is also an Independent Television Companies Association, designed to further the collective interests of the companies with such outside bodies as trade unions and sporting organisations, and generally to ensure that they speak as far as possible with one voice on public issues connected with television broadcasting policy.

The ITA receives no payments from licence revenue; its finance is drawn from payments made to it by the programme companies which, in the year ended 31st March, 1959, amounted to £2,871,293. In addition, advances (limited to £1 million during the first year of the ITA's existence and to a total of £2 million in all during the first five years) may be made by the Postmaster General with the consent of the Treasury for the purpose of paying initial expenses and for providing the ITA with working capital. However, by the end of March 1959 (some three and a half years after the inauguration of independent television) only £555,000 had been loaned to the ITA under this head, and this amount has already been repaid. There is also provision in the Television Act for an annual Exchequer grant, not exceeding £750,000, to be made to the ITA, but it has not, in fact, been found necessary to pay this grant.

Sound Broadcasting

The BBC operates four domestic sound broadcasting services from 58 long-wave and medium-wave transmitters at 44 transmitting stations, and two main groups of external broadcasting services from 39 high power, high frequency transmitters: 37 in the United Kingdom and two (used for relay purposes) at Tebrau, near Singapore. Until recently, the domestic sound services were broadcast solely on long and medium wavelengths, allocated to the United Kingdom under the Copenhagen Agreement of 1948, which aimed at minimising interference between the broadcasting stations of the participating countries. However, the growth in

the number of European broadcasting stations after that date (there are now twice as many as in 1948) so diminished the effectiveness of the Agreement that, in 1955, the BBC began to establish a network of very high frequency (VHF) transmitters. By 1959, 18 permanent VHF transmitting stations had been built and put into operation, and the VHF service is now available to some 96 per cent of the population. The VHF stations broadcast the Home Service appropriate to the region in which they are situated, as well as the Light Programme, the Third Programme and Network Three, and for all these services greatly improved reception is assured. Further VHF stations are under construction or projected.

There are 148 studios for the domestic sound programmes, of which 59 are in London and 89 at various centres in the regional areas. The external services use 35 London studios. There are also semi-automatic studios which can be operated in 17 different centres in the United Kingdom by a programme official without the assistance of an engineer.

Domestic Services

The domestic sound services, which produce over 20,000 programme hours a year, are designed to cater for the varying tastes of a diverse listening public. They consist of the Home Service, the Light Programme, the Third Programme and Network Three.

The *Home Service*, which occupies some 17 hours a day, is planned to serve the middle section of the community. It provides a wide range of musical programmes (with particular emphasis on the great standard works of music) and plays (including the classics and contemporary drama). The principal news and information programmes, discussions on domestic and foreign affairs, party political broadcasts, special programmes for children and young people (e.g., Children's Hour, and Broadcasts for Schools), religious programmes, and 'outside broadcasts' (which take the listener to national occasions and sporting events) are also produced on the Home Service. In addition, the Home Service is the vehicle for regional broadcasting, which is the generic term for programmes specially compiled for listeners in Scotland, Northern Ireland, Wales, the north of England, the Midlands and the west of England. All these services carry items from the basic Home Service, together with programmes produced within the region; the Welsh Service also broadcasts daily in the Welsh language.

The *Light Programme*, which occupies 18 hours a day, is intended for those who wish to enjoy relaxation and distraction in the least demanding form. Entertainment programmes are the main feature; they include light music and dance music as well as variety programmes, short plays, programmes for women and children (e.g., Woman's Hour and 'Listen with Mother') and regular news summaries and bulletins. There are also frequent 'outside broadcasts' on the Light Programme, and commentaries on sport.

The *Third Programme*, which normally occupies three hours in the evening (five on Saturdays and Sundays), is planned for minority audiences. The range, style and presentation of its programmes, which include music, drama, talks and features, are intended to satisfy listeners' intellectual and cultural interests. The programme claims on the one hand to be contemporary and forward-looking, and on the other to represent the artistic achievements of the past; it has an international flavour in that many of the plays presented are translations of European drama or are by American authors, and many of the talks are about foreign political thought and cultural activities in countries overseas.

Network Three, which occupies between one and two hours on weekday evenings, provides programmes of specialised interest, mainly programmes of the spoken word. It is intended as a means of meeting the practical needs (e.g., for further education, learning a foreign language, or acquiring expert information on various aspects of hobbies or work) of groups of people, which cannot properly be met during the evening hours by the other services.

Each of the domestic sound services has its own characteristics, but the Home Service and the Light Programme are planned together, while the Third Programme is co-ordinated with the other two, so far as is practicable, to ensure the widest possible choice of programmes for listeners.

External Services

The external broadcasting services of the BBC are intended to provide a link of culture, information and entertainment between the peoples of the United Kingdom and those in all other parts of the world; to present events of world-wide importance with speed and accuracy; and generally to reflect British opinion and the British way of life. These services are heard in English and in 39 other languages throughout the world for a total, between them, of over 80 hours a day, which is longer than the output of all the BBC's domestic sound and television services added together, and involves the transmission of some 48,000 news bulletins and 50,000 talks (including press reviews) in the course of a year.

The services, under the Director of External Broadcasting, are divided into the European Services and the Overseas Services, each in charge of a Controller. Within these two groups are the regional divisions. Common to both groups is the External Services News Department, which prepares all the news broadcasts for overseas audiences.

The *European Services* broadcast over 200 programme hours a week and are sub-divided into five regional groupings: French, South European (Spain, Italy, Greece, Turkey, Israel), Central European (Czechoslovakia, Hungary, Poland, Finland), East European (Soviet Union, Roumania, Bulgaria, Yugoslavia, Albania), and German. There is also an English Service directed to the whole of Europe. The material broadcast by the regional services is mainly supplied by two central departments: the European Talks Department and the European Production Department.

The *Overseas Services*, which are directed to countries outside Europe, broadcast over 350 programme hours a week. They comprise the General Overseas Service (started as the Empire Service in 1932) with its world-wide audience of English-speaking listeners, and a number of regional services in English and 22 other languages. The General Overseas Service pays special attention to its audiences in the Commonwealth, to British Forces and to British communities overseas; it gives a complete programme service, including news bulletins, talks, music, light entertainment, religious services and sport, for 22½ hours every day. The regional services include: the African, Caribbean, and Colonial Services; the North American, the Pacific and the South African Services; the Arabic Service for the Arab countries; the Asian Services for India, Pakistan, Ceylon, Iran and the Far Eastern countries; and the Latin American Service.

The external broadcasting services also include the *Transcription Service*, which records over 700 BBC sound programmes annually and distributes them to broadcasting organisations in all parts of the world; the *Television Transcription Unit*, which distributes telerecordings and films made by the BBC television service for screening by other television organisations; the 'English by Radio' service,

which distributes English lessons with explanations in over 30 languages and reaches an audience of several millions by direct transmission from London and by recorded broadcasts from local stations; and the *Monitoring Service*, which reports foreign broadcasts from some 35 countries and languages and works under a reciprocal agreement with its American counterpart as regards monitored material from the Far East and other areas inaudible in the United Kingdom.

The selection of the countries to which the external broadcasting services are to be directed, and the time on the air to be allotted to each, rests with the Government departments concerned with overseas relations. On appropriate occasions, these departments are consulted about the content of the programmes, but the final responsibility remains with the BBC.

The BBC maintains offices for its representatives in New York, Paris, Berlin, Ottawa, Toronto, Sydney, New Delhi and Beirut, to encourage local interest in the BBC and to provide the BBC with advice and help concerning programmes, whether for home listeners about that area or for listeners in the area itself. The offices (which are concerned with the whole field of sound radio and, where appropriate, television) are also responsible for promoting good relations with the local broadcasting organisations, and for keeping the BBC informed about local broadcasting and other developments of interest; in these matters, they work closely with the BBC's Overseas and Foreign Relations Department. Audience research is undertaken by sampling surveys and by listener panels, 15 of which operate in different parts of the world.

Television Broadcasting

In 1936, the BBC launched the world's first public television service. By 1959, this service was being transmitted from 22 stations and was available to over 98 per cent of the population. In the course of a year, it broadcasts more than 7,000 items on a national network, made up of studio productions, outside broadcasts, films, and relays from the continent of Europe.

BBC studio productions come from the London Television Theatre at Shepherd's Bush; eight main London studios; and fully equipped regional studios at Manchester, Birmingham, Cardiff, Glasgow, Bristol and Belfast. In addition, eleven small interview studios (used mainly for short insertions into the news) have been established in London, Scotland, Wales, Northern Ireland, and in the north, midland and west of England regions. The Television Film Department of the BBC is housed at the Ealing film studios; and Television News and newsreel programmes originate from a specially equipped studio at Alexandra Palace, London. Substantial progress has been made in the building of a Television Centre, in London (see photograph facing p. 486). The studios at this centre will be used for the first time in 1960.

Outside broadcasting (which during the year 1958-59 transmitted nearly 1,000 programmes, providing about 18 per cent of the total BBC television output) covers most parts of the United Kingdom with its mobile units, presenting programmes both of national and of specifically regional interest, and also brings scenes of events in Europe to viewers in the United Kingdom.

The first regular independent television (ITV) service was inaugurated in September 1955, by a programme transmission from the ITA London station at Beaulieu Heights, Croydon. By the end of 1959, programmes were being transmitted from 11 stations in all parts of Great Britain, and approximately three-quarters of the total number of homes with television sets were able to receive ITV.

ITV programmes are produced at studio centres in London, Birmingham, Manchester, Glasgow, Cardiff, Southampton, Newcastle, Norwich, Belfast and

Dover. The establishment of these studios is the direct result of the ITA's policy of encouraging the development of regional television, and the programmes are either for local broadcasting or for transmission to one or more of the other regions through the link system operated by the ITA. At the end of 1959, this consisted of 1,554 miles of vision links, about 66 per cent of which were two-way circuits.

Generally speaking, both the BBC and the ITV services provide programmes of music, drama, light entertainment, variety, and films. Broadcasts for schools are produced on five days in the week both by the BBC and by one of the programme contractors—Associated-Rediffusion Limited. Religious broadcasting is also a feature of both services, as are balanced political discussions, programmes on the arts, children's and family programmes (including BBC programmes specially designed for deaf children), television films, interviews with outstanding personalities, investigations into matters of public interest, agricultural television broadcasts, news reports covering international, national and local events, and outside broadcasts, particularly of sport. The State opening of Parliament was televised for the first time in 1958.

Advertising is altogether excluded from the television programmes of the BBC, as from their sound programmes. The ITA broadcasts advertisements (on which the programme companies depend for their revenue) subject to the relevant provisions in the Television Act, namely, that there should be no sponsoring of programmes by advertisers, that all advertisements should be clearly distinguishable as such and recognisably separate from the programme, and that the amount of time given to advertising should not be so great as to detract from the value of the programmes as a medium of entertainment, instruction and information. The ITA has also agreed rules with the Postmaster General about certain classes of broadcasts (including, in particular, religious services) in which advertisements may not be inserted and, on the advice of the Advertising Advisory Committee, has drawn up certain 'principles for television advertising' with a view to the exclusion of misleading advertisements from the programmes. The cost of inserting advertisements in the ITA service is borne by the advertisers, who pay the programme companies for advertising time.

Wire Broadcasting

Wire broadcasting—a system whereby radio programmes are received at a central point, whence they are distributed by wire to listeners and viewers—began in the United Kingdom in 1925 as a private venture and remains in the hands of private enterprise. Wire broadcasting companies operate under licence from the Postmaster General. They are not allowed to originate programmes of their own, and their function is to distribute programmes put out by general broadcasting stations. A specified minimum of their programme material must be taken from BBC sources. Subscribers to wire broadcasting services must have ordinary broadcast receiving licences. At the beginning of 1959, there were 432 wire broadcasting services, of which 156 gave television service and the remainder sound-only service. The number of subscribers at that date was 1,048,438, including 196,165 who were receiving television services.

Audience Research

Audience research, as conducted by the BBC, is carried on by interviewing, each day, some 4,000 people throughout the country (a sample or cross-section of the public) to ascertain what programmes they have heard or viewed on the preceding day, and by means of listening and viewing panels, the members of which are volunteers, prepared to answer questions about the programmes they usually

hear or see. Trends in public taste, which cannot be discovered by an examination of the results of interviews and of the reports of the panels, are the concern of a special section of the BBC's Audience Research Department, which also carries out general surveys.

Audience research is undertaken, on behalf of independent television, by an independent research organisation—Television Audience Measurement Limited.

Scientific Research

Research into the technical problems of broadcasting is carried out by the scientific and engineering staffs of the BBC, the Post Office and the radio industry in order to improve the technical facilities of broadcasting and thus to increase its efficiency.

Colour television has been one of the main interests of the BBC Research and Designs Departments which, following some years of laboratory work, began a series of experimental transmissions in colour from the London Television Station in 1955. The results of these transmissions have been communicated to the Television Advisory Committee which the Postmaster General appointed to advise him, *inter alia*, on the whole field of development of colour television. Meanwhile, regular colour test transmissions continue for the use of the radio industry.

The BBC has also been conducting experiments on a new system of recording television pictures on magnetic tape. The equipment produced for this operation, known as Vision Electronic Recording Apparatus (VERA), was publicly demonstrated in April 1958, and has since been tried out in the Lime Grove studio centre.

Other subjects of research undertaken by the BBC have been: the improvement of studio acoustics, microphones and loudspeakers; the introduction of stereophonic sound tests; ultra-high-frequency bands; long-distance propagation studies in the short-wave, VHF and ultra high frequency bands; the development of a mobile unit, known as the Roving Eye, for outside broadcasting, which contains television cameras and all the equipment needed to operate them, together with VHF transmitters; and methods of increasing national coverage both in sound and television by such means as the sharing of frequencies between stations in different parts of the United Kingdom, the construction of transmitting aerials having special horizontal radiation patterns, and the development of unattended satellite transmitters of very low power for providing a television or VHF sound service to small and isolated communities. Following the installation of one such transmitter in 1958, the BBC is proceeding with the construction of 14 more for television and 10 for VHF sound. In June 1959, the BBC inaugurated its cablefilm system for transmitting short newsfilms over the transatlantic telephone cable.

International Relations

The BBC is an active member and the ITA, together with the Independent Television Companies Association, is an associate member of the European Broadcasting Union. The union, which now has 26 active members among the broadcasting organisations in the European zone (and 17 associate members mostly from outside Europe, including the United States of America and many of the nations of the Commonwealth) meets every year to exchange views and information, and to study common problems in the programme, technical and legal fields. It also maintains a Technical Monitoring Station, where frequency measurements and other observations on broadcasting stations can be carried out.

Within the Commonwealth, the BBC is closely associated with the broadcasting organisations of the other member countries and of the dependent territories. A decision, taken at the third Commonwealth Broadcasting Conference in 1956,

to achieve still closer co-operation, resulted in the BBC joining with the Australian Broadcasting Commission, the Canadian Broadcasting Corporation, and the Rank Organisation to establish a British Commonwealth International Newsfilm News Agency Trust. Through an associated non-profitmaking company (the British Commonwealth International Newsfilm News Agency Limited), this joint enterprise provides a reliable service of international news on film for subscribers who operate television services, produce cinematograph newsreels or acquire newsfilm for any other purposes, including education, anywhere in the world.

The BBC also participates in the work of the International Telecommunication Union (ITU)—the United Nations specialised agency responsible for the regulation and control of all international telecommunication services (including sound and television), for the allocation and registration of all radio frequencies, and (through its International Consultative Committees) for the promotion and co-ordination of the international study of technical problems in broadcasting. In addition, the BBC has long-established relations with the United Nations Radio Division, with the United Nations Educational and Scientific Organisation, and with the Council of Europe.

Eurovision

As well as taking part in the exchange of sound radio programmes arranged between the member countries of the European Broadcasting Union (EBU), the BBC is a regular contributor to the network of European television (Eurovision). This network now includes twelve Western European member countries; the exchange of television programmes between them is arranged by the EBU, which maintains an International Television Co-ordination Centre (Eurovision) in Brussels. To facilitate programme exchanges on the Eurovision network a permanent television link, operating in either direction between London and the Continent, has been constructed by the Post Office. The range of Eurovision is steadily increasing as countries expand their networks and facilities, and new countries participate.



The new BBC television centre at the White City, London, will be opened in 1960.



Preparing for a BBC television broadcast: the Asian Club programme.

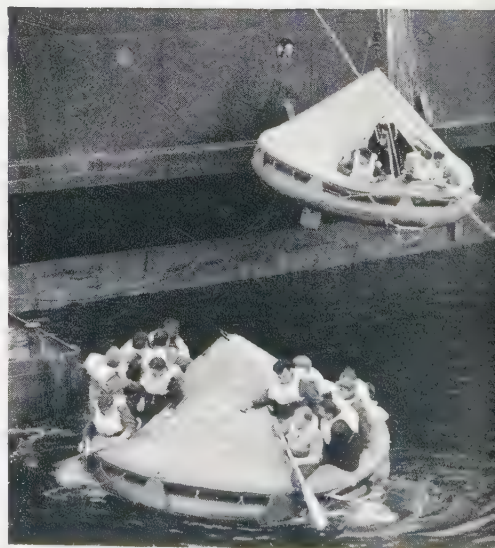
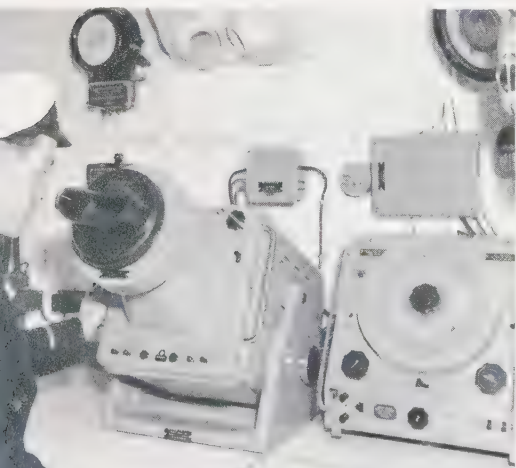
Dungeness Lighthouse: the light from the new, small 2-kW lamp is three times as powerful as the former light. *Inset:* The new lens being installed above the old one.



The Walmer, Kent, lifeboat. The Royal National Lifeboat Institution (see p. 359) maintains 154 lifeboats round the coast of Britain.



Marconi marine remote radar display unit and *Lodestone* long-range direction finder.



Inflatable rubber life-rafts, which have already saved many lives, using a special launching system.

XV. THE PRESS

The British press caters for all political views, different levels of education and a wide range of interests. It is free from Government censorship and interference.

The British public buys more newspapers per person than any other in the world. It has been estimated (by UNESCO, in 1958) that for every 1,000 inhabitants of the United Kingdom 573 copies of daily papers are sold every day. Next comes Sweden with 462 per 1,000 inhabitants. Circulation figures of individual newspapers are proportionately high. The *Sunday News of the World*, which reached a circulation of over 8 million copies, and the average circulation of which has recently (January to end-June 1959) been 6,555,485, holds the world's record for the circulation of a newspaper; and seven of the daily morning newspapers have circulations in the millions. These high figures are largely explained by the fact that the London morning papers have 'national' circulations, i.e. they are distributed throughout the United Kingdom, being available almost everywhere on the day of publication.

Britain imports half its newsprint requirements, while the other half is made from imported raw materials. In 1958, about 950,000 tons of newsprint were used in the United Kingdom. The average size of London national morning papers varies between 10 and 20 pages. Prices of daily newspapers vary from 2½d. (for the majority of papers) to 4d. (for *The Times*). Sunday papers run up to 40 pages and to a price of 5d.

According to *The Newspaper Press Directory*¹ there are some 150 daily and Sunday newspapers: 16 London mornings, 3 London evenings, 10 London Sundays; 18 mornings, 64 evenings and 3 Sundays in England outside London; 1 morning and 3 evenings in Wales; 7 mornings, 8 evenings and 2 Sundays in Scotland; 3 mornings and 1 evening in Northern Ireland; 1 Isle of Man daily; and 1 morning and 2 evenings in the Channel Islands.

There are over 1,300 weekly papers published in Greater London and almost every sizeable town in the rest of the country. These papers deal mainly with news of interest to the region where they are sold. There are also the sporting papers, papers in foreign languages for groups of nationals of other lands resident in Britain, and religious papers.

In 1947, a Royal Commission on the Press was appointed to inquire into the finance, control, management and ownership of the British press. Its report was issued in June 1949 (*Cmd. 7700*) and has been recognised as a comprehensive and authoritative analysis.

The Royal Commission found that the British press 'is completely independent of outside financial interests and that its policy is the policy of those that conduct it'; there was evidence that the direct influence of advertisers on policy was 'negligible'. After studying management and ownership, the Royal Commission concluded that 'there is nothing approaching monopoly in the press as a whole, or . . . in any class of newspaper'. Among other recommendations it suggested the establishment of a General Council of the Press and this was set up in 1953 (see p. 494).

¹ Changes in the number of newspapers occur constantly; figures are based on the 1959 edition of *The Newspaper Press Directory*, published early in 1959.

TABLE 43
'NATIONAL' NEWSPAPERS AND LONDON EVENINGS

Title	General Political Tendency	Owner	Circulation average Jan.-June (inc.) 1959
DAILIES			
<i>The Times</i> (1785)	Independent	Times Publishing Co. Ltd.	254,046
<i>Daily Telegraph</i> (1855)	Conservative	Daily Telegraph Ltd.	1,140,685
<i>Manchester Guardian</i> ¹ (1821)	Liberal	Manchester Guardian and Evening News Ltd.	182,561
<i>Daily Express</i> (1900)	Independent Stresses importance of British Empire	Beaverbrook Newspapers Ltd.	4,052,713
<i>Daily Mail</i> (1896)	Conservative	Associated Newspapers Ltd.	2,071,054
<i>Daily Herald</i> (1912)	Labour	Odhams Press Ltd.	1,464,773
<i>News Chronicle</i> and <i>Daily Dispatch</i> (1846, as <i>Daily News</i>)	Liberal	Daily News Ltd.	1,207,217
<i>Daily Worker</i> (1930)	Communist	Daily Worker Co-operative Society Ltd.	56,487
<i>Daily Mirror</i> (1903)	Left of centre	Daily Mirror Newspapers Ltd.	4,496,752
<i>Daily Sketch</i> (1909)	Conservative	Associated Newspapers Ltd.	1,155,537
<i>Financial Times</i> (1888)	Independent	The Financial Times Ltd.	95,163
LONDON EVENINGS			
<i>Evening News</i> (1881)	As for <i>Daily Mail</i>	As for <i>Daily Mail</i>	1,169,698
<i>Star</i> (1888)	As for <i>News Chronicle</i>	As for <i>News Chronicle</i>	758,488
<i>Evening Standard</i> (1827)	As for <i>Daily Express</i>	As for <i>Daily Express</i>	576,618
SUNDAYS			
<i>Observer</i> (1791)	Independent	The Observer Ltd. All shares owned by The Observer Trust	660,444
<i>Sunday Times</i> (1822)	Conservative	Thomson (formerly Kemsley) Newspapers Ltd.	879,647

¹ From 24th August, 1959, *The Guardian*.

TABLE 43 (*contd.*)

Title	General Political Tendency	Owner	Circulation average Jan.-June (inc.) 1959
SUNDAYS (<i>contd.</i>)			
<i>News of the World</i> (1843)	Independent	News of the World Ltd.	6,555,485
<i>People</i> (1881)	Independent	Odhams Press Ltd.	5,054,783
<i>Sunday Express</i> (1918)	As for <i>Daily Express</i>	As for <i>Daily Express</i>	3,447,203
<i>Sunday Dispatch</i> (1801)	As for <i>Daily Mail</i>	As for <i>Daily Mail</i>	1,594,322
<i>Reynolds News</i> (1850)	Supports the Co-operative Movement and the Labour Party	Co-operative Press Ltd. Co-operative societies are shareholders	342,152
<i>Empire News and Sunday Chronicle</i> (1884)	Conservative	As for <i>Sunday Times</i>	2,102,262
<i>Sunday Pictorial</i> (1915)	As for <i>Daily Mirror</i>	Sunday Pictorial Newspapers Ltd.	5,331,268
<i>Sunday Graphic</i> (1915)	Conservative	As for <i>Sunday Times</i>	877,788

Ownership

As Table 43 shows, several companies or groups own a number of newspapers; in some cases, newspaper groups also have interests in groups of periodicals. The five largest press groups are: Associated Newspapers Limited, which, with four London papers, owns directly or through subsidiary companies a total of 14 dailies and 16 weeklies, of which 9 dailies and 6 weeklies are linked under the management of Northcliffe Newspapers Group Limited; Thomson Newspapers Limited (formerly Kemsley Newspapers Limited), which owns eleven dailies, ten weeklies, and four Sundays and whose chairman also controls Scotsman Publications; Westminster Press Group, which controls nine dailies and 38 weeklies; Provincial Newspapers Limited, which owns four dailies and 20 weeklies; and the Mirror Group, which owns a London daily and Sunday, each with Manchester editions, two general weeklies, and, through a subsidiary company, two Glasgow dailies and one Glasgow Sunday paper.

There are two very large publishers of periodicals in England and Wales: the Mirror Group, controlling Fleetway Publications (formerly the Amalgamated Press), which produces about 70 periodicals and many technical publications; and Odhams Press Limited, which controls the George Newnes Group and the Hulton Press, and owns in all about 100 general, specialised, trade and technical journals. There are other, smaller groups and publishers of single magazines. In Scotland, the largest publishers of magazines are the Thomson-Leng Group (see p. 492).

Certain newspapers and periodicals are controlled by trustees whose aim is to preserve the character and traditions of the paper and prevent control from falling

into the hands of people who might change the editorial policy and tradition. Various forms of trust govern the direction of *The Times*, *The Guardian*, *News Chronicle* and *Star*, *Observer*, *Economist*, *Spectator* and *New Statesman*.

The 'National' Press

Ten morning papers with headquarters in London, and one in Manchester, are 'national' in the sense of circulating throughout the British Isles, and there are 10 'national' Sunday papers (see Table 43). Thirteen of these papers have northern editions published in Manchester. The leading Scottish papers (see below) circulate widely, and certain specialised daily papers also have a circulation not limited by region, e.g., *Lloyd's List and Shipping Gazette* and *Sporting Life*. *Woman's Mirror* (weekly) also has a specialised national circulation (1,099,122). The three London evening papers each have affiliations with one of the national dailies, but they draw their readership very largely from people living within fifty miles of London.

Provincial Newspapers

The provincial newspapers, numbering about 90 morning or evening dailies and Sunday papers and over 900 weeklies, provide the general and local news expected by readers whose daily life and interests are known to, and shared by, the newspaper staff. Some 60 provincial papers still in existence were founded before 1800; the oldest being *Berrow's Worcester Journal*, dating back to 1709. With a few exceptions (e.g., *Yorkshire Post*, *Birmingham Post*, *Newcastle Journal*, *Northern Echo*, *Sheffield Telegraph*, *Western Mail*) they reflect no definite political tendency. The total circulation of the provincial morning papers is about 2½ million, of the provincial evenings about 7½ million, and of the provincial weeklies about 12 million. Among the provincial mornings, *The Journal* (Newcastle) and the *Yorkshire Post* have circulations of over 100,000; the *Northern Echo* and the *Sheffield Telegraph*, over 91,000; the *Birmingham Post* and the *Liverpool Daily Post*, about 75,000; two provincial Sunday papers—the *Sunday Sun* (Newcastle-upon-Tyne), owned by Thomson Newspapers, and the *Sunday Mercury*, owned by a subsidiary company of the Birmingham Post and Mail Limited—have circulations of over 200,000; while, among evening papers, the *Liverpool Echo and Evening Express* has a circulation of over 404,000, the *Manchester Evening News* of over 328,000, and at least ten evenings have circulations of over 100,000. The provincial newspaper, often read far more thoroughly than the national daily, is a valuable medium for national and local advertising.

London suburban weeklies, of which there are about 90, are closer to the provincial weeklies than to the national dailies in readership and appeal.

Ownership of the provincial press is varied: it includes individual owners, two or more partner proprietors, local printing and publishing firms, newspaper companies owning between one and half a dozen papers, or press groups controlling a chain of newspapers in different parts of the country.

Scotland

Scotland has seven morning, eight evening and two Sunday newspapers; in addition, there are separate Scottish editions of the *Daily Express*, *Daily Mail* and *Sunday Express*, with their own editors. *The Glasgow Herald*, founded in 1783, and *The Scotsman*, founded in 1817 and a daily since 1855, published in Edinburgh, are among the papers which influence serious opinion in Great Britain. The circulation of the former is 78,713 and of the latter 63,361 (average figures January to end-June 1959). Other morning papers are *The Daily Record*, *The Bulletin* (a picture paper), and the *Noon Record*, published in Glasgow; *The Courier and*

Advertiser, published in Dundee; and Aberdeen's *The Press and Journal*. Evening papers include the *Edinburgh Evening News* and *Evening Dispatch*, Glasgow's *Evening Times* and *Evening Citizen*, Dundee's *Evening Telegraph and Post*, Aberdeen's *Evening Express*, the *Paisley Daily Express* and the *Greenock Telegraph*. The Sunday papers are the *Sunday Mail*, the *Sunday Post* and the *Scottish Sunday Express*.

Among the weekly papers are the *Weekly Scotsman* and *The People's Journal*, which also circulate outside Scotland; in all there are 164 weekly papers published in Scottish towns.

Northern Ireland

Northern Ireland has three morning papers and one evening paper, all printed in Belfast: they are *Belfast News-Letter*, *Northern Whig*, *Irish News* and *Belfast Telegraph*. There are 42 weekly newspapers in Northern Ireland, including two published twice a week. There is also a sporting paper, *Ireland's Saturday Night*, published each Saturday afternoon (Belfast). The majority are published by individual companies and all the counties have good coverage of local papers. There are no Sunday newspapers.

Wales

One daily morning newspaper, the *Western Mail*, a Thomson newspaper, is printed and published in Cardiff; it has a circulation of over 97,508, mainly in the southern half of Wales. In North Wales, the *Liverpool Daily Post* gives wide coverage to events in the area. Evening papers published in Wales are the *South Wales Echo*, Cardiff, the *South Wales Daily Argus*, Newport, and the *South Wales Evening Post*, Swansea. North Wales is served by the *Liverpool Echo and Evening Express* and to a smaller extent by evening papers published in Manchester, the *Manchester Evening News* and the *Manchester Evening Chronicle*.

Since October 1954, a special Welsh edition of the *Empire News and Sunday Chronicle* has been printed in Cardiff. Other national Sunday papers carry columns of news on Welsh affairs.

The weekly press includes 56 weekly papers in English, many of them carrying articles in Welsh; two bilingual papers; and eleven papers in Welsh, of which five are denominational.

Channel Islands and Isle of Man

The Channel Islands have one morning paper (*Guernsey Star*), two evening papers, one twice weekly and two weeklies. The Isle of Man has one daily, a special weekly edition of which is published on Saturday, and four other weeklies.

Periodicals

Weekly, monthly and quarterly journals cover an enormous field. Salient features of the last twenty-five years have been the development of periodicals with a mass appeal and the growth of the trade and technical press. There are over 4,000 periodical publications: general magazines with circulations ranging up to over a million; women's magazines, some of which have even larger circulations; numerous publications for children; a wide range of religious periodicals for all denominations; magazines dealing with sports, hobbies, fiction and humour; periodicals specialising in various subjects such as politics, finance and economics, science, the professions, and the arts; over 1,700 trade and technical publications, many with circulations not confined to the United Kingdom; and the journals of learned societies, trade unions, regiments, universities, colleges, schools, and other associations. There has also been a large increase in recent years in the number and circulation of 'house

journals', produced by industrial organisations mainly for their staffs; a survey made in 1958 by the British Association of Industrial Editors estimated that some 1,500 house journals were published, and were read by about 30 million people.

Some popular periodicals, such as *Reveille*, *Weekend*, and *John Bull Illustrated* have circulations (January to June 1959) of over a million copies. Six women's weeklies have circulations of over a million, *Woman* having over 3 million buyers; a monthly magazine, *Woman and Home*, also sells over a million copies of each issue.

Of considerable influence, although their circulations are only in the tens of thousands, are the weeklies dealing with political, social and economic affairs: *The Economist*, which covers topics of the day from a far wider angle than its title would indicate and is politically independent; *The New Statesman*, a review of politics, literature and the arts with an independent socialist political tendency; *The Spectator*, which covers much the same subjects and is non-party; *Time and Tide*, which has a right-wing tendency; and *Tribune*, with a left-wing but strongly anti-communist bias. Other papers whose circulations are in the tens of thousands are the illustrated weeklies such as *The Illustrated London News*, *The Sphere*, *The Field*, and *Country Life*, while *Punch* is the leading humour periodical. The readership of all these weeklies is greater than is apparent from their circulation figures, since they are widely read in libraries, clubs and other institutions.

Monthly and quarterly journals, generally speaking, appeal to the more serious type of reader, particularly the literary and political journals and those specialising in international and Commonwealth affairs.

In addition to the circulation of periodicals published in England, Wales has had, since 1957, its own farming weekly, the *Welsh Farm News*. There are also eight monthly and quarterly magazines and periodicals published in the Welsh language and three published in English. The University of Wales, the National Museum of Wales and the National Library of Wales also publish several important periodicals.

Four monthly illustrated periodicals are published in Scotland: *Scottish Field*, *Scotland's Magazine*, the *Scots Magazine* (founded 1739) and *Scotland*; and two weeklies devoted to farming interests, *Farming News* and the *Scottish Farmer*. Among literary journals, probably the most famous is *Blackwood's*, published in Edinburgh. Popular magazines are numerous: the Thomson-Leng group of Dundee alone distributes about 10 million copies of weeklies in the British Isles and abroad.

In Northern Ireland, weekly, monthly and quarterly publications cover farming, the linen industry, building, motoring and politics.

News Agencies

There are three principal British news agencies:

Reuters Ltd., which is a world news agency owned by the newspapers of the United Kingdom, Australia and New Zealand. The owners treat their stockholding in Reuters as 'a trust rather than an investment' and are bound by a Trust Agreement which guarantees the independence and integrity of the news service for all time. Reuters has correspondents in all major capitals and is associated with the principal news agency in every country in the world. It employs several hundred staff correspondents abroad and also has the services of more than 2,000 local journalists as part-time correspondents throughout the world.

Press Association Ltd., which distributes home news. It is owned by British provincial newspapers. All profits are used to develop the service.

Exchange Telegraph Company Ltd., a public company which distributes home news to British papers and other subscribers.

Two other agencies supply a general service of overseas news:

Associated Press, which is a branch of the Associated Press of America.

British United Press, which is a Canadian subsidiary of the United Press Association of America.

There are also some 60 United Kingdom, Commonwealth and foreign agencies and news services with offices in London, as well as agencies in other cities, specialising in various aspects of newspaper and periodical requirements.

Training for Journalism

Until recently, and this therefore applies to most older newspapermen working today, journalists were, broadly, of two classes: those who entered newspaper offices on leaving school and worked their way up, learning by experience; and university graduates who held some of the specialised posts, such as correspondents abroad or on special subjects, leader-writers, sub-editors or reporters. The second class has always been comparatively small. The Kemsley Newspaper Group made provision for combining instruction with the practice of journalism, and courses in journalism were organised by the Polytechnic, Regent Street, London, and by King's College, London (until the outbreak of war in 1939).

In 1952, an agreement was reached for a more comprehensive plan for the training and education of junior journalists in newspaper offices. A National Council for the Training of Journalists, on which the principal press organisations are represented, administers the scheme, which is based on the voluntary co-operation of newspaper offices. There are regional training committees of local newspaper representatives to supervise the operation of the scheme in provincial areas. Examinations are taken at two levels: the proficiency test which may be taken after three years of active journalism; and the diploma, which may be awarded after further examination and submission of a thesis. Over 80 per cent of each year's new intake of journalists by British newspapers are now trained under this system.

Press Institutions

Both employers and employees in the industry are well organised. On the employers' side, the most important organisations are the Newspaper Proprietors' Association, whose members are proprietors of London (national) daily and Sunday newspapers; the Newspaper Society, whose members are proprietors of provincial daily and weekly newspapers in England and Wales; the Scottish Daily Newspaper Society; the Scottish Newspaper Proprietors' Association; the Belfast Newspaper Society; the Publishers' Group, Irish Master Printers' Association (Northern Alliance), whose members are the proprietors of weekly newspapers in Northern Ireland; and the Periodical Proprietors' Association, whose membership embraces the independent publishers of trade and technical publications and general magazines. On the employees' side there are the Institute of Journalists (IoJ)—the National Association of Journalists until 1889—incorporated by Royal Charter in 1890, and the National Union of Journalists (NUJ), founded in 1907. The National Union of Journalists has a membership of about 14,500 working journalists; editors who have powers of dismissal are excluded from full membership but may be associate members. The Institute of Journalists admits all qualified journalists on equal terms of membership, and can claim, therefore, to be representative of the profession as a whole. Free-lance journalists (who are not on the staff of any one paper or group of papers but send contributions to any journal) may belong to the NUJ or IoJ. The aims of these organisations are the improvement of the economic status of journalists, the promotion of their professional welfare, and the safeguarding of the status of the press and its editorial staffs.

The aims of the Guild of British Newspaper Editors are, *inter alia*, to sustain the dignity of editorship, to raise and safeguard the professional status of editors, to protect the rights and freedom of the press, and to improve the education and training of junior journalists: the guild has over 300 members. The British Association of Industrial Editors is the professional organisation to which most editors of house journals belong.

The Typographical Association, in the provinces, and the London Typographical Society, in London, are the principal craft unions organising such workers as compositors and machine minders. The National Union of Printing, Bookbinding and Paper Workers is principally concerned with the publishing and distribution side, and the National Society of Operative Printers and Assistants (NATSOPA) includes machine assistants, clerical workers and general assistants in printing works. These unions cover the printing industry generally.

The General Council of the Press

Following the recommendations of the Royal Commission on the Press, a Press Council representative of the various press organisations was set up in 1953. Its aims are:

- to preserve the established freedom of the British press;
- to maintain the character of the British press in accordance with the highest professional and commercial standards;
- to keep under review any developments likely to restrict the supply of information of public interest and importance;
- to promote and encourage methods of recruitment, education and training of journalists;
- to promote a proper functional relation among all sections of the profession;
- to promote technical and other research;
- to study developments in the British press which may tend towards greater concentration or monopoly; and
- to publish periodical reports recording its own work and reviewing from time to time the various developments in the British press and the factors affecting them. Reports are published annually.

The council consists of eight editorial representatives, four nominees of the National Union of Journalists, three nominees of the Institute of Journalists, and ten managerial representatives.

The work of the Press Council has been largely concerned with complaints of unjustifiable intrusion by the press into the private lives of individuals, including members of the Royal Family, or other breaches of professional standards, and with the admission of the press to meetings of local authority councils and to hearings of administrative tribunals.

The Press and the Law

The press in Britain has the same freedom as the individual to do and say what it likes provided it does not transgress the law; and, in general, it enjoys very great liberty of comment on matters of public interest. There are no special press laws (other than those relating to such matters as the registration of newspapers), but requirements which affect the press occur in a variety of Acts of Parliament; for example, the admission of the press to meetings of local authorities is regulated by the Local Government Acts, and restrictions on the reporting of domestic proceedings and proceedings concerning juveniles are imposed by legislation governing procedure in the law courts.

In particular, the press must comply with the copyright laws and with the laws against the publication of matters covered by the Official Secrets Acts, with the laws of seditious libel, blasphemous and obscene libel, and defamation, with the laws for the protection of children from publications which might do them moral harm, and with the laws against fraudulent advertising, against breach of parliamentary privilege, and against 'contempt of court'—for example, the publication of anything affecting a case before the courts which might tend to influence the result of the trial, or of comment on court proceedings which might tend to prejudice their reputation for fairness.

Legal proceedings against the press are infrequent; the majority of actions that do take place are brought by private individuals seeking to protect their own interests, for example, against libel. In such cases, the editor, proprietor, publisher, printer and distributor of the newspaper, as well as the author of the article, may all be held responsible.

XVI. SPORT

The people of Britain attach great importance to sport. The extent of their interest, which has its roots far back in history, is shown by the number of people of all ages and both sexes who take an active part in sport of some kind, by the vast crowds that throng to watch popular sporting events (spectators at professional football matches, for example, number between one and two million weekly during the season), by the amount of space devoted to sport in the national and provincial press, and by the frequency with which programmes on sport are broadcast, both on sound radio and television, and the size of the audiences that such programmes command.

The Government is not directly concerned with the organisation or promotion of sport, but it gives encouragement and support to physical education through the Ministry of Education and the Scottish Education Department, and it allocates grants from public funds to bodies responsible for the provision of playing fields and other facilities for physical recreation, and to national sporting organisations towards the cost of appointing instructors (coaches) in various kinds of sport.

The Minister of Education and the Secretary of State for Scotland, although not responsible for prescribing the curricula in any school, require that all schools receiving financial assistance from public funds shall provide for the physical education (e.g., gymnastics, games, athletics, dancing and swimming) of their pupils, and are concerned, through inspectors of physical education and by means of departmental publications, that a high standard shall be maintained. All schools in the national system must have their own playing field, or the use of one, and most secondary schools have a gymnasium. Facilities for, and instruction in, most kinds of sport are also provided at the independent preparatory and public schools, and at the universities (some of which have recently instituted departments of physical education).

The Ministry of Education is closely associated with the Central Council of Physical Recreation (see p. 178), and the Scottish Education Department is similarly associated with the corresponding Scottish body, the Scottish Council of Physical Recreation (see p. 178). Both the ministry and the department also co-operate with the National Playing Fields Association (see p. 178). Local authorities are empowered, under the Public Health Acts and the Physical Training and Recreation Act, 1937, to provide playing fields. Gymnasias, lawn tennis courts, golf courses and swimming baths are also provided by local authorities on a varying scale.

In Britain, the word 'sport' is used generally to describe such pursuits as organised games, athletics, field or country sports, indoor games, aquatic sports, and such other activities as horse-racing, dog-racing, show-jumping, riding, boxing, rock climbing, motor racing, cycling, and rifle shooting. Those who engage in sport may be professionals, i.e. paid players, or they may be amateurs, i.e. people who play games or take part in other forms of sport usually in their leisure time and without monetary reward. Professionals keep up the technical standards of the sports in which they take part¹; spectators make a vital contribution by their enthusiasm and their financial support; but the sporting life of Britain derives its

¹ Some sports, for example, athletics, Rugby football, hockey and rowing, are entirely amateur.

character principally from the amateur element—the many thousands of boys and girls and men and women who engage in sport solely for pleasure.

Outdoor Games

Outdoor games played in Britain include team games such as football, cricket, and hockey, and games, e.g., lawn tennis and golf, in which individuals or couples match their skill. Judged by the number of participants and spectators the most popular of the team games are football and cricket, and the most popular of the individual games is lawn tennis, but each of the others has its own particular following.

Football

Although football of a kind was played as long ago as the Middle Ages (and there are even earlier records), as an organised game it dates from just over a century ago. One type of football, in which the feet only are used, was adopted at Cambridge in 1855; the other type, in which the ball is handled as well as kicked, was first played at Rugby School, from which it derives its name, and was adopted by the Blackheath football club in 1859.

In England and Wales, the controlling body of the non-handling game, *Association Football* (colloquially known as 'soccer') is the Football Association (FA), which was formed in 1863. The association's chief function is to promote and protect the interests of the game and to prevent infringement of the agreed rules; it also arranges for the instruction of promising young players and organises various matches and competitions, including the international matches played by England, the Amateur Cup competition (see p. 498), two national youth competitions, and the competition for its own leading trophy—the Football Association Challenge Cup. Over 350 clubs are registered with the FA—more than 200 as full members and between 130 and 140 as associate members. Scotland and Northern Ireland have their own controlling bodies: the Scottish Football Association, which is responsible for the organisation of international games and the Scottish Football Cup fixtures; and the Irish Football Association.

The principal professional matches in England and Wales (played weekly) are controlled by the Football League, which comprises the major professional clubs in these countries. In Scotland, the Scottish Football League is in charge of the weekly games; Northern Ireland has its own league. Clubs belonging to the English and Scottish Leagues are organised in divisions, the members of which compete against one another for the respective league championships. Their positions in the divisional tables are decided at the end of the season by the number of points gained for wins or draws, the totals determining promotion or relegation.

Several million people stake small weekly sums on the results of the matches in the league competitions by filling in what are known as 'pools' coupons; the aggregate sum staked during the 1958–59 season was £75,675,000. The odds against winning anything in the pools are very great, but the prizes, which are tax free, are extremely high—last season, individual payments of £300,000 were occasionally made. The promoters of the pools deduct varying amounts from the stakes for commission and expenses, including payments to the leagues for the use of league fixture lists.

The annual competition for the FA cup is organised on a knock-out basis, and any team, whether or not a member of the league, can enter. The final—the Cup Final—is the most important football match of the year in England; it is always played at Wembley Stadium, near London, which can accommodate some 100,000 spectators. The Scottish Cup Final is played at Hampden Park, in Glasgow.

The international matches between England, Scotland, Wales and Ireland, in which distinguished amateur players sometimes appear, also excite great interest, as do the matches between British teams and teams from European and South American countries.

There are many more amateur association football players than there are professionals (the comparative figures are about 30,000 amateurs, including schoolboys and members of the armed forces, to 7,000 or 8,000 professionals), but with one or two notable exceptions their teams cannot compete on equal terms, since professional teams are more systematically and intensively trained. Amateur teams compete against each other for the Football Association Amateur Challenge Cup.

Rugby football or 'rugger' is played under the auspices of the Rugby Union (a controlling body with functions similar to those of the Football Association), which was established in 1871. The rules of the game are completely different from those that govern soccer, and there are 15 players, instead of 11, in a side. International matches between England, Scotland, Wales, Ireland, and France are played regularly at the leading rugby football grounds of each country, including Twickenham, London—the headquarters of the Rugby Union. Other important rugger matches are: the county championship competitions; the annual match between the universities of Oxford and Cambridge; the Hospitals' Cup final; and the Services Challenge Cup final.

Seven-a-side football (a variant of rugby football) is also played by clubs and in English and Scottish secondary schools.

Membership of the Rugby Union is strictly confined to amateur clubs, but in the north of England there is a professional variant of the game played by teams of 13 instead of 15, according to the rules of the Rugby League, which was instituted in 1895. The Rugby League holds frequent international matches as well as regular inter-county competitions. The match for its highest trophy—the Rugby League Challenge Cup—is played at Wembley and is attended, on average, by some 75,000 spectators.

Cricket

Cricket is often called the English national game. The exact date of its origin is not recorded, but a variant of the game was undoubtedly being played during the sixteenth century, and by the beginning of the eighteenth century it had gained greatly in popularity both in the villages of England and on the larger country estates.

The game has been played more or less as it is played today since the middle of the eighteenth century, after it had been regularised, in 1744, by the adoption of a generally accepted set of rules. In the early part of the period, a cricket club, formed at the little Hampshire village of Hambledon, made an outstanding name for itself and acquired a membership representative of patrons of cricket from all over England; later, in 1787, the Marylebone Cricket Club (MCC), now the governing body of cricket, was founded with its headquarters in the centre of London on a site rented by a Thomas Lord. In the year 1809–10, the MCC, retaining the name *Lord's*, moved its headquarters to a ground in Regent's Park, and four years later to another ground in the same neighbourhood, at St. John's Wood, where it has remained ever since.

Following the establishment of the MCC, the rules of cricket became stabilised; other clubs that sprang up all over England during the nineteenth century recognised its authority, and nowadays all cricket is played according to the 'laws of cricket' as laid down by the MCC in consultation with cricketing organisations in Britain and the overseas Commonwealth.

In England, cricket is played in schools and universities, and almost all towns and villages have their cricket teams which play at least one match a week during the season—roughly May to September. There are many thousands of cricket grounds all over England—in the London area alone nearly 400 pitches are provided by the county council besides many leased or owned by various well-established clubs.

Apart from the university match, between Oxford and Cambridge and certain representative games, such as Gentlemen versus Players, i.e. amateurs versus professionals, the greater part of first-class cricket is played in a county championship between seventeen 'first-class counties'. (The other counties have a 'minor counties championship' of their own.) Among famous grounds are the *Oval*, Kennington, London, headquarters of the Surrey Cricket Club; *Old Trafford*, Manchester; *Headingley*, Leeds; *Trent Bridge*, Nottingham; and *Lord's*—centre of cricket throughout the world.

In the late nineteenth century, cricket was played almost entirely by amateurs. Nowadays, when first-class matches last three days and each county plays between twenty and thirty matches in a season, most county players are professionals, although there are still some amateurs who can afford the time to play regularly. League cricket, which is a feature of the game in the north of England, is played by teams mainly consisting of amateur Saturday afternoon players with one or more professionals, many of whom are distinguished players from other Commonwealth countries. The MCC is an entirely amateur body, although sometimes retired professional cricketers of 'the highest merit' are elected to honorary membership of the club.

In addition to county championships, matches known as 'test matches' are played regularly between England and other countries of the Commonwealth. The first of these matches was played at Melbourne, Australia, in 1877, between England and Australia. Present-day test matches are played against Australia for a mythical trophy called the 'Ashes', and also against South Africa, New Zealand, the West Indies, India and Pakistan. The matches last five days, and are played alternately in England and in the country of the opposing eleven; they arouse great popular interest and are widely reported in the press and on sound radio and television.

Hockey

Variants of hockey (as distinct from ice-hockey) have been played in Britain for at least five centuries and perhaps even longer; a haphazard form was played in schools before football became popular, and many hockey clubs were to be found in the London area during the latter half of the nineteenth century. Modern hockey, however, dates from the formation (in 1886) of the Hockey Association, which standardised the rules. Nowadays there are several hundred hockey clubs affiliated to the Hockey Association and a county championship was instituted in 1957, but the game has never attracted the same wide public interest as football and cricket, and there are no professional county teams and no cup-ties. On the other hand, regular amateur international matches (inaugurated in 1894) are played between England, Scotland, Ireland and Wales, with overseas countries, e.g., France, the Netherlands, and Denmark, sometimes taking part.

In Britain, hockey is more commonly played by women than by men. The controlling bodies are: the All England Women's Hockey Association (founded 1895) to which are affiliated some 1,550 girls' schools and about 950 women's clubs; and the Scottish Women's Hockey Association. The first international women's hockey match took place in 1896. Nowadays, one such match is always played at Wembley Stadium, and in 1959, spectators numbered 50,000—a record attendance at hockey matches, including men's games.

Lacrosse

Lacrosse, adapted from the game played by the Iroquois Indians of North America, is played mainly by women—in girls' schools, at lacrosse clubs, and at universities, at some of which it is also played by men. International lacrosse matches are played, as well as regional matches by women's teams representing the east, west, south, north and midlands of England.

Netball

Netball is a popular game for girls and women, and is commonly played in schools, youth clubs and women's netball clubs all over the country. The controlling body is the All England Netball Association.

Polo

Polo, of which the earliest records are Persian, was first played by the British in India, and brought to England by the 10th Hussars in 1869. The governing body of British polo is the Hurlingham Polo Association to which all the Commonwealth polo associations are affiliated.

Polo players are a very small section of the community, for the cost of the purchase and upkeep of polo ponies is very high. However, many of the clubs now own trained ponies which are hired out to members at moderate cost, thus enabling promising young players with only modest incomes to learn and play polo. There are about 1,400 players handicapped by the Hurlingham Polo Association, and the number is still growing.

Public interest in polo has increased greatly since the end of the second world war, and large numbers of spectators attend inter-club tournaments and matches between high-handicap teams composed of players from several countries. The better known polo grounds are those at Cowdray Park, Sussex; Windsor Great Park; Cirencester Park, Gloucestershire; Tarporley, Cheshire; and Tidworth on Salisbury Plain.

Lawn Tennis

A form of tennis has been played out of doors from the earliest times; but modern lawn tennis dates from about 1873, when it began to take its place with cricket as one of the British national summer games. In 1877, the words 'and lawn tennis' were added to the title of the All England Croquet Club at Wimbledon and in the same year the first championships were played; the Lawn Tennis Association, the controlling body of the game in Britain, was founded in 1888. The governing body of the game in the world is the International Lawn Tennis Federation, with headquarters in London and Paris.

The number of people who play lawn tennis has greatly increased during the past sixty years; the game is played nowadays in most secondary schools (particularly in girls' schools) throughout the summer months, by families in their own gardens, and at the innumerable tennis clubs that exist throughout Britain. Many local authorities also provide tennis courts in parks and recreation grounds, where members of the public may play at a very low cost.

The annual amateur championships, held for two weeks at the end of June and beginning of July, at Wimbledon, London, are the main event of the lawn tennis season. These championships, for which men and women of many nationalities compete, draw large crowds; there is accommodation for over 30,000 spectators in the grounds of the Wimbledon Club where the matches are played—14,000 can be accommodated round the centre court where the championship finals take place. Other tournaments which attract public attention are: the British Hardcourt Championships; the British Junior Championships, in which boys and girls com-

pete; the county championships; the Service Championships; and the matches for the public schools' cup. An important international event is the tournament for the Davis Challenge Cup (for men), in which a number of countries compete. Britain and the United States of America also compete annually for the Wightman Cup (for women).

Golf

Golf originated in Scotland, where for centuries it has borne the title of the Royal and Ancient Game, but it did not become really well known in the other countries of the United Kingdom until towards the end of the nineteenth century. Since then, however, it has gained steadily in popularity, and nowadays there are golf courses in the vicinity of many towns and villages—some owned by local authorities, but the majority owned by golf clubs. The headquarters of the Royal and Ancient Golf Club is St. Andrews, Scotland.

The main event of the golfing year is the British Open Golf Championship, which was first played in 1860; other important matches include the Walker Cup (for amateurs) and the Ryder Cup (for professionals), both played between Britain and America; the Amateur Championship; and the Ladies Championship.

Bowls

The game of bowls has been played in Britain since the thirteenth century. Nowadays the flat green game (which is quite different from the American game) is regulated, as far as the English Bowling Association is concerned, by the International Bowling Board (IBB), founded in 1905. The Bowling Associations of Ireland, Scotland and Wales also come under and play to the laws as laid down by the IBB, but there are other bowling associations in England—the English Bowling Federation, the Crown Green Association and the English Women's Bowling Association—which are not under the IBB's control.

During the summer, bowls is played on bowling greens in the open; in winter, it is played on indoor greens, of which there are a fairly large number throughout the country. At one time regarded as a pastime for the elderly, the game has now greatly increased in favour—nearly 2,450 bowling clubs in 34 counties of England are affiliated to the English Bowling Association alone, and international, national and inter-county matches are played.

Other Outdoor Games

Other outdoor games played in Britain include: *croquet*, which originated in Ireland and reached the height of its popularity during the nineteenth century, although it is still played on a limited scale according to rules laid down by the Croquet Association, founded in 1900; and *curling*, a winter variant of bowls played on ice, which has been popular for more than three centuries in Scotland, the Royal Caledonian Club being recognised throughout the world as the controlling body of the game.

Athletics

Amateur athletics, which include running (track, road and cross-country), relay racing, jumping, hurdling, throwing and race-walking, are governed by the Amateur Athletic Association (AAA), which was founded in 1880 to encourage, promote and control amateur athletics, to improve the management of amateur athletic meetings by the establishment of uniform regulations, and to promote annual championship matches. The association, whose membership increased rapidly from small beginnings, is now organised from club to national level by

honorary officers and managed by representative members appointed by the northern, midland, southern and Welsh areas and by affiliated clubs and associations (amateur athletic clubs, schools and youth organisations), of which there are hundreds throughout England and Wales. The AAA employs five full-time national coaches, towards the cost of which it receives grants from the Ministry of Education. These coaches conduct courses, including courses at a summer school, for teachers and athletes wishing to qualify by examination as honorary coaches; some 2,000 'qualified honorary coaches give voluntary services in the counties and districts of England and Wales. Scotland and Northern Ireland have their own amateur athletic associations, with functions analogous to those of the AAA; there is also a separate Women's AAA.

International athletics and the selection of teams representing the United Kingdom are dealt with by the British Amateur Athletic Board, which is composed of representatives of the three national associations and is affiliated to the International Amateur Athletic Federation.

Track meetings of athletics are held throughout Britain from April to October. The main events in England and Wales are: the AAA championships for men and international matches held at the White City, London; area and county championships; and the universities, Services, business houses and schools championship meetings. Clubs usually compete in cross-country running from October to March, and international, county and area cross-country championships are held.

Teams representing Great Britain and Northern Ireland compete in the Olympic Games (held every four years), and separate teams representing England, Wales, Scotland, and Northern Ireland compete in the Commonwealth Games, the most recent of which were held at Cardiff, in Wales, in 1958.

Highland Games. The Highland games are traditional gatherings of local people in the Highlands of Scotland, at which sports (including tossing the caber, putting the weight, and throwing the hammer), and dancing and piping competitions take place. Among the better known Highland games are the Northern Meeting at Inverness, the Braemar Gathering on Deeside (traditionally attended by the royal family), the Argyllshire Gathering at Oban, and the meeting at Aboyne. The Highland games attract large numbers of spectators from all over the world.

Country Sports

The most popular country sports are hunting, shooting and fishing; these are old-established sports with a long history, and they still play a considerable part in the life of the countryside.

Hunting

In Britain hunting means primarily hunting the fox on horse-back with a pack of hounds especially bred for the purpose, but it also includes stag-hunting, which preceded fox-hunting and is still pursued—mainly in Devon and Somerset; hunting the hare, either on foot with beagles or with harriers when the followers are mounted; and otter-hunting along the banks of rivers.

Fox-hunting originated some 200 years ago. Originally a sport mainly for the landed gentry and local farmers, it has gradually widened its appeal, in spite of the fact that it is an expensive pastime for those who are not farmers. Farmers now outnumber all others in the hunting field, but a large number of other people, including many who live in towns, take a keen interest in the sport.

There are between 190 and 200 packs of hounds in England and Wales, 26 in Ireland, and 10 in Scotland. The packs range in size from the large establishments in the 'shires', i.e. the midlands of England (e.g., the Belvoir, the Cottesmore, the



Rolls-Royce *Silver Cloud* 6-cylinder saloon: one of the world's most luxurious cars.



Jaguar *XK150* drophead coupé: a new version, with disc brakes; it develops 250 b.h.p.



The Triumph *Herald*: a new British light car of evolutionary design.



A Cooper Climax, one of several prize-winning British racing cars, winning at Oulton Park.



The London-Birmingham motorway, one of the new roads, under construction (see pp. 200-213)

A competitor
in the
Highland Games
at Blackford,
Perthshire,
throwing the
28 lb. weight.



Miss Pat Smythe riding Mr. Pollard at the Inter-
national Horse Show, White City London.



Ian Black (Scotland), European and Empire champion
and holder of several British records.

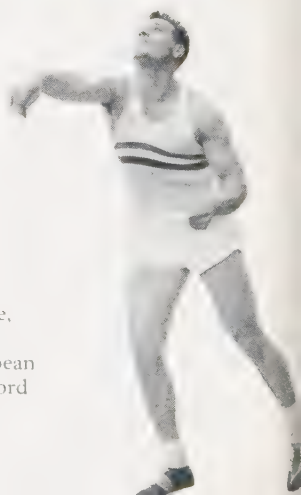


Peter Radford (England), British 100 yards
champion 1959.

Norman Sheil (England), world amateur
pursuit champion 1955 and 1958.



Arthur Rowe,
who set up
a new European
shot put record
with 61 feet.



Quorn, and the Fernie) where mounted followers may be two hundred or more, to small kennels in the west and north, where hunting is often on foot.

The fox-hunting season proper starts in early November and lasts until April; it is preceded by cub-hunting, i.e. the hunting of young foxes, when young hounds are taught the science of hunting. Meets of the fox-hounds, held on village greens, at cross-roads, or in the grounds of country houses, and attended by many people who do not intend to ride to hounds, are one of the most picturesque sights of the winter countryside. At the end of the season, most hunts organise steeple-chases, known as point-to-points, which are patronised by large crowds.

Hunts are financed mainly by the subscriptions of their members and with the aid of the farmers, whose support enables fox-hunting to continue to flourish; sometimes, however, the Master of Fox-hounds (MFH), who is in charge of the hunt, must bear a proportion of the cost.

Shooting

Shooting as an organised country sport may be said to date from the early part of the nineteenth century; nowadays, it consists mainly of grouse shooting, partridge shooting, pheasant shooting and wildfowling (duck and geese). There is also some snipe and woodcock shooting.

There is virtually no free shooting in any part of the United Kingdom. In the first place, a gun licence or a game licence must be applied for and purchased annually, and secondly, nearly all game birds are to be found on privately owned land, shot over either by the owner and his friends or by syndicates who have leased the shooting. However, in some parts of the more remote countryside, rough shooting may be enjoyed in a less formal way. Much of the country's wild-fowling is controlled by the Wildfowling Association of Great Britain and Northern Ireland, through its numerous clubs.

Grouse, partridge, pheasant and certain other game birds are 'preserved'; that is to say, there is a 'close season' during which they are protected under the game laws and allowed to breed in security, under the care of privately employed gamekeepers on numerous estates. The grouse, partridge and pheasant seasons open on 12th August, 1st September and 1st October, severally, and last for between four and five months. Grouse shooting takes place mostly in Scotland, northern England and North Wales, where the main grouse moors are to be found; partridge and pheasant shooting in nearly every county of England, Wales and Scotland, the former mainly over farm land, and the latter in or near woodland; and wildfowling on the marshes and fenlands of the coastal areas.

Deer stalking, which derives its name from the fact that, in order to get an effective shot, a very cautious approach is needed (since red deer have a keen scent, are far-sighted, and take alarm at the slightest sound), is mainly a sport of the Highlands of Scotland. The tracts of land on which the deer are preserved (the close season lasts from June to October) are known as 'deer forests', although some of them are almost devoid of trees; deer forests range in size from 9,000 or 10,000 acres to over 30,000 acres.

Fishing

Fishing is the most popular of the country sports in that it is within the reach of everyone in some form or another (from the small boy with his hook and line to the experienced fly-fisherman), and that many more people fish in their leisure hours than hunt or shoot.

The outstanding forms of the sport in Britain are salmon and trout fishing. Trout streams are to be found in most parts of the country, and in Scotland there

are also many hundreds of lochs which provide good sport. Salmon fishing may be enjoyed on many rivers in England and North Wales, but the best salmon rivers are to be found in Scotland and Northern Ireland. In England and Wales, the most widely practised form of fishing is for coarse fish (e.g., pike, perch, carp, roach, tench, chub and bream), and the National Federation of Anglers (NFA) has more than a million members. Match angling—competitive fishing for coarse fish by weight—is a feature of the many angling clubs affiliated to the NFA, particularly in the midlands and north of England; a national angling championship, composed of 110 teams of 12 anglers, is organised annually by the NFA; and the NFA enters a team in the International Angling Competition.

Fishing around the coasts is another popular pastime, while deep-sea fishing for tuna and shark has gained many adherents since the end of the second world war.

Coastal and deep-sea fishing is free to all, but, as a rule, freshwater fishing has to be paid for. Most coarse fishing is let to angling clubs and associations; trout and salmon fishermen either rent a stretch of river, join a club, stay at a hotel with its own fishing rights, or pay for the right to fish by the day, week or month. The cost of salmon fishing is particularly high.

Indoor Games

Indoor games played in Britain include *billiards*, *table tennis*, and *badminton*, which are enjoyed by large numbers of people, and for which facilities are provided in social clubs of every kind, including youth clubs; and games such as *real tennis* (a game which originated in thirteenth-century France), *squash rackets*, *rackets* and *fives*, which are less national games than games of the schools, universities and specialised clubs. Annual championships are held in all these games, the controlling bodies of which are: the Billiards Association and Control Council; the Badminton Association of England and the Scottish Badminton Union; the Tennis, Rackets and Fives Association; and the Squash Rackets Association.

Basket-ball, an indoor variant of netball which originated in the United States of America during the nineteenth century, is also played in Britain, primarily by men. Matches in the game are included among the Olympic events—the controlling body in Britain being the Amateur Basket Ball Association.

Aquatic Sports

The most commonly practised of the aquatic sports are rowing, sailing and swimming. All three are included in the Olympic events and the Commonwealth Games.

Rowing

Rowing as a pastime is enjoyed by people from all sections of the community, and as a sport, it arouses considerable public interest. The two annual rowing events which excite the greatest enthusiasm are the University Boat Race, which originated in 1820 and has been rowed annually on the Thames in the early spring since 1836; and Henley Regatta, founded in 1839, which takes place each July at Henley-on-Thames in Oxfordshire. Considerable interest is also shown in the Head of the River Race from Mortlake to Putney, in March, in which between 200 and 300 eights row in procession—the largest assembly of racing craft in the world—and in the regattas held at many riverside resorts every summer.

The University Boat Race, which provides one of the sights of London, is between eight-oared crews from Oxford and Cambridge over a course of some $4\frac{1}{4}$ miles between Putney and Mortlake; it is watched by many thousands of rival supporters gathered on both sides of the river. Victory in the boat race is a much-coveted honour, but the winning eight receives no tangible award.

Crews from all over the world compete at Henley Regatta, where various kinds of races rowed over a straight course of one mile 550 yards are arranged, e.g., for the Grand Challenge Cup, open to eight-oared crews from any nation, the Silver Goblets for pair oars, the Diamond Sculls for single scullers, and the Ladies Challenge Plate, open to crews from schools and colleges in the United Kingdom.

The art of oarsmanship is taught in many schools, universities and rowing clubs, including women's rowing clubs, throughout Britain; and women as well as men compete in the European rowing championships. The Amateur Rowing Association is the governing body of the sport.

Sailing

Enthusiasts have always devoted much of their leisure to yachting on the inland waters and round the coasts of Britain, but since the end of the second world war the sport, and in particular small boat sailing, has greatly widened its appeal. Sail numbers registered in the Royal Yachting Association's small boat classes in May 1958 were: Flying Fifteens 312, International Fourteens 703, National Twelves 1,728, Fireflies 2,323, Merlin Rockets 945, National Eighteens 227, Swordfish 196, and Redwings 201, and there is an even greater number of still smaller sailing boats not included in the register.

Most British yacht racing is administered by the Royal Yachting Association, subject to the rules of the International Yacht Racing Union, founded in 1907. The main event of the inshore yachting season is the annual regatta at Cowes in the Isle of Wight, the headquarters of the Royal Yacht Squadron, founded in 1812. Other events include the Round the Isle of Wight race and the races arranged during the special yachting weeks (or fortnights) held at such sailing centres as Poole in Dorsetshire, Bembridge in the Isle of Wight, Lowestoft in Suffolk, Harwich and Burnham-on-Crouch in Essex, Plymouth in Devon, Falmouth in Cornwall, and on the Scottish river Clyde.

Off-shore, or ocean, racing is based on rating and measurement rules drawn up by the Royal Ocean Racing Club, founded in 1925. Typical courses are: Cowes to Jersey (Channel Islands), Plymouth to La Rochelle (Charente Maritime, France), and Harwich to the Hook of Holland.

The famous yacht race between Britain and America for the America's Cup (originally given by the Royal Yacht Squadron in 1851 and presented in 1857 to the New York Yacht Club for competition by the owners of *America*, the winner of the cup in 1851) is now held at increasingly long intervals, owing to the expense involved. The cup has remained in America since the institution of the race, the last challenger being the British yacht *Sceptre*, in 1958.

Swimming

Many children in Britain learn to swim at school, or during holidays at the seaside, and swimming as a summer pastime is enjoyed by millions of people. The existence of indoor swimming baths makes all-the-year swimming possible for devotees of the sport. Considerable interest is taken in underwater swimming, and there are several clubs to which enthusiasts may belong. National and international swimming and diving championships are held annually—the controlling body in England is the Amateur Swimming Association, and in Scotland, the Scottish Amateur Swimming Association. The association is also the controlling body for water polo, a team game played in swimming pools, which originated in Britain around 1880. The Olympic Games include international water polo matches.

Attempts to swim the Channel between various points on the coasts of France and England—some of which are successful—are made by swimmers of many nationalities every summer.

Other Aquatic Sports

Other aquatic sports enjoyed in Britain are *canoeing*, for which there are clubs all over the country, most of them affiliated to the British Canoe Union, the governing body of the sport; and *punting*, in which annual amateur championships are held at Maidenhead on the river Thames.

Racing

Racing is a term which, in Britain, is taken to mean first and foremost, horse-racing. Other forms of racing include greyhound racing, coursing, pony-racing, trotting races, and pigeon-flying.

Horse-racing

The history of the English turf proper began with the formation of the Jockey Club in 1750, although horse-racing was known in Tudor times and even earlier. The Jockey Club and the National Hunt Committee (founded in 1866) now exercise control over all horse-racing in England and indirectly in many other countries, and their rules are the basis of universal turf procedure.

There are two forms of racing: flat racing carried on from late March till November under the authority of the Jockey Club; and steeple-chasing, conducted under the rules of the National Hunt Committee.

The classic flat races are: the Two Thousand Guineas for colts and fillies, run on the Newmarket course, owned by the Jockey Club; the One Thousand Guineas for fillies only, also run at Newmarket; the Derby for colts and fillies, run at Epsom; the Oaks for fillies only, also run at Epsom; and the St. Leger for colts and fillies, run at Doncaster. The Derby is the outstanding event in the racing calendar; it takes place annually in early June and the scene on Epsom Downs on Derby Day is one of the most colourful and exciting of the sporting year. The most fashionable race-meeting of the flat racing season takes place on the course at Ascot in Berkshire. This meeting, which is held in mid-June, is known as 'Royal Ascot', and is traditionally attended by the Sovereign. The races for the Gold Cup and the Royal Hunt Cup are run during the June Ascot week.

The best known steeple-chase is the Grand National, first run in 1839, and run annually since then over the Aintree course near Liverpool. The race, which draws immense crowds and arouses widespread interest (and some criticism) tests the skill, stamina and courage of both horse and rider to the utmost. Important steeple-chase meetings are also held at Cheltenham in Gloucestershire and on many other courses from November to March.

There is racing on about 70 principal horse-racecourses situated all over the country. At some of these, races are held on less than ten days in the year (although the figure excludes courses where there is only one or two days' racing, and point-to-point courses), but on almost every weekday, there is racing on some course or courses, and the total number of meetings in a year (again excluding point-to-point racing) is about 700.

Horse-racecourses in general must be licensed by the Jockey Club or National Hunt Committee and approved by the Racecourse Betting Control Board, set up under the Racecourse Betting Act, 1928. On courses approved by the board, a totalisator can be provided. From the money staked on the totalisator, the board is empowered to deduct such percentage (at present approximately 10 per cent of the total stakes) as it may determine, and the revenue secured in this way is applied, after payment of the board's operating expenses and taxation, to the improvement of racing and horse breeding and the advancement of veterinary science and education. Betting between bookmakers and members of the public is legal without

restriction (except that no young person under eighteen years of age may place a bet) on all courses—provision for such betting must be made on courses approved by the Racecourse Betting Control Board. On most courses provision is also made for off-the-course betting with either bookmakers or agents of the board, but street betting away from the course is illegal.

Greyhound-racing

The racing of greyhounds after a mechanical hare started in Britain in 1926, when the first modern greyhound track was opened at Belle Vue, Manchester. There are now some 200 licensed tracks in operation, nearly all of which are situated in or on the outskirts of large towns. Racing usually continues throughout the year (although betting is limited by the Betting and Lotteries Act, 1934, to 104 days in any year), and meetings (which usually consist of eight races) are generally held two or three times a week. The licensing authorities for greyhound racing tracks are the county and county borough councils. Some twenty million people a year visit the tracks.

The main authority of the sport is the National Greyhound Racing Club, founded in 1928; its functions include drawing up the rules of greyhound racing and exercising strict discipline over all aspects of the sport. The National Greyhound Racing Society—an association of 65 of the leading tracks, which was also founded in 1928, accepts the rules of the National Greyhound Racing Club. Most of the classic greyhound races, including the Derby at the White City, the Laurels at Wimbledon, the St. Leger at Wembley, and the Cesarewitch at West Ham, take place in the London area, although many other large centres have their 'big' nights.

There is a considerable volume of betting at greyhound race-meetings, both with bookmakers and on the totalisator. Under the 1934 Act, the occupier of any licensed greyhound track is empowered to operate a totalisator on the 104 'appointed days' and to deduct not more than 6 per cent of the stake money for operating expenses before successful backers are paid, in addition to the 10 per cent tax payable to the Government in respect of bets placed through the greyhound totalisator.

Other forms of racing

Coursing is an old form of dog-racing that takes place mainly in the north of England and among miners, the chief trophy being the Waterloo Cup, first presented in 1836; *pony-racing* is generally carried on independently of any racing authority, although meetings are held at four race-courses under the rules of the Pony Turf Club; *trotting races* were introduced into Britain in 1876, and are held principally in the north of England and in Scotland; and *pigeon-flying* became popular after 1871, following the siege of Paris. Most towns in Britain have pigeon-racing clubs, many of which are enrolled under the National Homing Union, formed in 1896.

Riding

Interest in the art of horsemanship continues to increase steadily, and many more people have learned to enjoy riding as a pastime since the end of the second world war than at any time since the advent of the motor car. There are several hundred riding schools in Britain, many of a high standard; membership of the British Horse Society has risen to about 10,000; some 150 riding clubs have been established since 1945; and the Pony Club (open to young people up to the age of seventeen years) now has well over 30,000 members. Branches of the Pony Club (of which there are more than 200) are attached to most hunts in Britain and there are also a number of overseas branches.

The British Horse Society, as the National Equestrian Federation of Great Britain, is the authority on all matters relating to horses and ponies, including breeding, training, riding, show jumping and dressage, and is responsible for providing equestrian teams for the Olympic Games and all international events. The society is also the parent body of the Pony Club and the riding clubs, and in this capacity it organises and provides tests, lectures, demonstrations, courses and examinations to further the knowledge and raise the standards of British horsemanship and horsemastership.

Horse trials as well as hunter trials of all kinds are held throughout Britain during the spring and summer. The three-day trials held each year—in April at Badminton Park, Gloucestershire, and in September at Harewood, Yorkshire—are among the outstanding equestrian events of the year. These trials include dressage, cross-country and steeple-chase riding, and show jumping; some 20 one-day trials on similar lines are held annually.

Show Jumping

Show jumping competitions are held each year at over 1,000 shows. The main events take place during the Royal International Horse Show (held at the White City, London, under the auspices of the British Horse Society towards the end of July)—the outstanding contest being the individual jumping championship for the King George V Gold Cup. Jumping competitions are also a feature of the Horse of the Year Show, which takes place every October (since 1959, at Wembley Stadium) and is acknowledged to be one of the finest indoor horse shows in the world.

Since the end of the second world war, show jumping has attracted vast audiences and has increased greatly in popularity; much credit for this must be given to the British international show jumping teams who have competed in many countries with success.

Boxing

Boxing as an English sport probably originated in Saxon times. Its modern form, and the one that has been adopted in many overseas countries, dates from 1865 when the Marquess of Queensberry drew up a set of rules which eliminated much of the brutality that had hitherto characterised prize fighting, and made the basis of the sport a trial of strength and skill.

Nowadays, many boys learn to box at school and in boys' clubs, and there are various amateur boxing competitions carried out according to the rules of the Amateur Boxing Association (ABA), which controls all amateur boxing, including schoolboy boxing, club and association boxing, and boxing in the three Services.

Professional boxing is covered by the British Boxing Board of Control, founded in 1929. The board has strict medical regulations which provide for the examination of boxers before each contest, and the appointment of inspectors to ensure that the regulations are observed and that all contests are 'vetted' to safeguard against overmatching and exploitation.

Championships at fixed weights have been the rule in boxing contests since the presentation of the Championship Challenge Belts by the late Lord Lonsdale in 1909. Competitions organised by the ABA are decided at ten weights: flyweight, bantamweight, featherweight, lightweight, light welterweight, welterweight, light middleweight, middleweight, light heavyweight and heavyweight. The fixed weights in professional boxing are the same, except that there are no light welterweight or light middleweight classes.

Wrestling

Wrestling is one of the oldest sports in the world, dating as far back as 430 B.C. The style most commonly used in Britain nowadays is the 'free' style, which evolved from the Catch-as-Catch-Can or Lancashire style, but Cumberland and Westmorland wrestling is still practised in the north of England and in Scotland, and Cornish style wrestling (in which the contestants wear rough canvas jackets by which all the holds must be taken) takes place in Cornwall. Wrestling in the free and Graeco-Roman styles are used at the Olympic Games; in the Commonwealth Games only free style is wrestled.

Amateur wrestling in Britain is governed by the British Amateur Wrestling Association, which is affiliated to the International Amateur Wrestling Federation, under the rules of which all wrestling is conducted. Professional wrestling is usually in the 'all-in' or 'free' style, which is not the same as the free style used in amateur wrestling. Judo, a Japanese form of wrestling, has a large following, and is governed by its own associations; it is an effective form of defence against physical or armed assault.

Mountaineering

Mountaineering in Britain consists mainly of fell (or hill) walking, rock climbing, and, in winter when conditions are suitable, snow and ice climbing on the higher hills of Scotland, northern England and North Wales. Rock climbing is practised on the crags of Snowdonia in North Wales, the Highlands of Scotland, Skye, the English Lake District, and Derbyshire, as well as on many smaller outcrops. Climbs are graded from 'Easy' to 'Exceptionally Severe'—the technical difficulties of the higher grades compare with any that occur in other parts of the world. The popularity of mountaineering has increased enormously since the end of the second world war, and a very large number of clubs (ranging from purely local organisations to large bodies such as the Climbers' Club, the Scottish Mountaineering Club, and the Fell and Rock Climbing Club) exist throughout the country. The Alpine Club, founded in London in 1857, is the oldest mountaineering club in the world; the representative body of the sport is the British Mountaineering Council; the Mountaineering Association organises courses of instruction in climbing both in Britain and the Alps. Short courses for boys and girls over twelve years old and for adults are held at a privately owned mountaineering school opened in 1959 in North Wales.

British mountaineers have taken a leading part in exploring most of the great ranges of the world and in climbing their peaks, e.g., the first ascent of the Matterhorn in 1865, the first ascent of Everest in 1953, and of Kangchenjunga in 1955.

Motor Racing

Motor racing is one of the most popular spectator sports in Britain; more sports cars have been built in Britain than in any other country; and British drivers (including women drivers) have an international reputation second to none.

British cars and British drivers take part in the international rallies and world classic races which are the main features of the sport, and include the British classic races—the British Grand Prix, and the Tourist Trophy for sports cars, which was first held in 1905 in the Isle of Man and later at Dundrod in Northern Ireland, and now takes place on the circuit at Goodwood, Sussex. There are also several British national race meetings (16 in 1958) and British national rallies (8 in 1958), as well as a large number (over 2,500 in 1958) of day and night rallies and trials, endurance tests, hill climbs and other events, arranged by various driving clubs, of which there are over 400 in Great Britain.

The best known motor racing circuits (in addition to that at Goodwood) are those at Silverstone, Northamptonshire; Crystal Palace, London; Brands Hatch, Kent; Snetterton, Norfolk; Mallory Park, Leicestershire; Oulton Park, Cheshire; Aintree, near Liverpool; and Charterhall, Berwickshire, in Scotland. The controlling body of motor racing in Britain is the Royal Automobile Club (RAC), founded in 1897; the RAC is represented on the *Fédération Internationale de l'Automobile*, which draws up the regulations for international motor racing.

In addition to motor car racing, motor cycle races are held—the most important contest of the year is that for the Isle of Man Tourist Trophy—and motor cycle speedway racing, which was introduced into Britain in 1928, and is governed by the Speedway Control Board. The 1959 speedway championship of the world final was held at Wembley Stadium.

Cycling

The internationally recognised body for cycle racing in the United Kingdom is the British Cycling Federation—an amalgamation of the British League of Racing Cyclists and the National Cyclists' Union, founded in 1878. The federation controls track racing and massed start racing in Britain, and is concerned with the cycling events in the Olympic and Commonwealth Games and the annual world championship. Time trials are organised by the Road Time Trials Council.

Touring by bicycle is also a popular pastime, and both the British Cycling Federation and the Cyclists' Touring Club (CTC) cater for this. The CTC is the oldest touring club in the world and has a membership of 40,000. It has consuls in all parts of the United Kingdom to give advice and practical help to touring cyclists; its fifty district associations arrange holiday and week-end tours, and competitions, rallies and rides of all kinds; and its special travel department gives CTC members every facility, both at home and abroad, from the provision of itineraries to the supplying of tickets, maps and other essential requirements.

Rifle Shooting

Full-bore (.303) rifle shooting is organised by the National Rifle Association, founded in 1860. The Imperial Meeting is held annually at Bisley Camp, Surrey, and is open to subjects of the Queen, and to all-comers; the latter are restricted to certain competitions. The meeting extends over 17 days, the first week consists of team and individual competitions for members of the armed forces, and there are three days for schools only. The premier award of the meeting is the Queen's Prize, which attracts about 1,250 entries.

Small-bore (.22) rifle shooting—carried out either on indoor ranges of 15 to 25 yards in length or on open ranges up to 200 yards—is also widely practised in Britain. Some 4,000 clubs throughout the country are affiliated to county rifle associations and the National Small-Bore Rifle Association (NSRA), which arranges inter-club and inter-county competitions of various kinds for teams and individuals. The NSRA also organises a National Bisley Meeting (attended by some 1,500 competitors in 1959), a Scottish meeting, and a pistol shooting competition at Bisley. International small-bore rifle matches are fired against teams from overseas countries, and British teams are entered for the world championships and the competitions in the Olympic Games.

Other Forms of Sport

Other forms of sport enjoyed in Britain include:

Archery, for which British and world championships are organised by the Grand National Archery Society, which held its first meeting in 1895.

Clay Pigeon Shooting, in which the target is thrown automatically. The sport, which is carried on according to the code laid down by the Clay Pigeon Shooting Association, calls for skilled marksmanship, and international and national championships are held annually.

Fencing, which is practised at some schools and universities, and in fencing clubs. Annual championships are held under the auspices of the Amateur Fencing Association, founded in 1898.

Flying, which has been fostered as a sport by British flying clubs for the past thirty years. Racing is a feature of most club meetings and displays, the principal event being the contest for the King's Cup, first held in 1922. From time to time alterations have been made in the rules and regulations governing this race, but with few exceptions, the original intention of keeping it a 'circuit of Britain' has been maintained.

Gliding, which is carried on under the auspices of the British Gliding Association. Difficulties in obtaining suitable sites for gliding are somewhat hindering the development of this sport, but, during 1958, 252 gliders were being operated by over 4,500 pilots, and hours of flight exceeded 26,000. National gliding championships are held bi-annually.

Ice-skating, which is enjoyed as a pastime by many people on indoor skating rinks in towns, and outdoors in the country when, rarely, the temperature is sufficiently low. Professional and amateur skating championships are staged in Britain, and British figure skaters are internationally famous. The governing body of the sport is the National Skating Association of Great Britain. International ice hockey matches are played under the auspices of the British Ice Hockey Association.

Pot-holing, which is the exploration of caves. The principal organisation concerned with the sporting and scientific aspects of this activity is the British Speleological Association, but there are many clubs operating in various parts of the country, the oldest of which—The Yorkshire Ramblers' Club (1893) and the Derbyshire Pennine Club (1899)—were pioneers of the sport.

Ski-ing, which is a popular sport among the British, who first developed and obtained international recognition for the Alpine competitions. Many people from Britain spend annual winter sports holidays in Switzerland, Austria, France, Italy, Norway, and elsewhere on the Continent; in recent years an increasing number have taken advantage of the facilities offered at the Scottish ski-ing centres in the Cairngorm mountain area and in Glen Coe. Training facilities are provided at dry ski-training sessions organised by the Central Council of Physical Recreation in co-operation with the Ski Club of Great Britain (the national governing body of the sport) at many centres in England, Wales and Scotland.

APPENDIX

BRITISH CURRENCY AND CURRENCY EXCHANGE RATES, WEIGHTS AND MEASURES, AND CONVERSION TABLES

BRITISH CURRENCY

4 farthings=1 penny (1d.)	5 shillings=1 crown
12 pence =1 shilling (1s.)	20 shillings=1 pound (£1)
2 shillings =1 florin	21 shillings=1 guinea
2 shillings and 6 pence=1 half-crown	

Coins in common use are: half-penny, penny, threepenny piece, sixpence, shilling, two shilling piece (florin), and half-crown.¹

Bank of England *notes* are issued in denominations of 10s., £1 and £5. Notes of £1 and 10s. are legal tender in the United Kingdom for the payment of any amount; notes of £5 are legal tender in England and Wales only.

Notes are issued by Scottish banks in denominations of £1, £5, £10, £20, £50 and £100; though not legal tender, these notes are generally accepted in Scotland and in some other parts of the United Kingdom. Northern Ireland banks issue notes with denominations of £1, £5, £10, £50 and £100; these are legal tender in Northern Ireland only.

CURRENCY EXCHANGE RATES

COUNTRY				CURRENCY UNIT	CURRENCY UNITS PER £1 STERLING (Par value as at 31st July, 1959)			
Argentina..	..	..	..	Peso	..	..	238.5	(b)
Australia ..	..	..	..	Australian Pound ..	..	..	1.25	
Austria ..	..	..	..	Schilling	..	..	72.8	
Belgium ..	..	..	..	Belgian Franc..	..	..	140.0	
Brazil ..	..	..	..	Cruzeiro	..	..	52.0	(a)
Canada ..	..	..	..	Canadian Dollar ..	..	..	2.70	(b)
Ceylon ..	..	..	..	Ceylon Rupee ..	..	..	13.33	
China (People's Republic)	..	..	..	Jen Men Piao (Yuan)	..	..	6.90	(a)
Denmark ..	..	..	..	Danish Krone ..	..	..	19.37	
East Africa ..	..	..	..	East African Shilling..	..	..	20.0	
France ..	..	..	..	Franc	..	..	13.82	
Germany, Federal Republic of..	..	..	..	Deutsche Mark ..	..	..	11.74	
Ghana ..	..	..	..	British West African Pound..	..	..	1.0	
Greece ..	..	..	..	Drachma	..	..	84.0	
Hong Kong ..	..	..	..	Hong Kong Dollar ..	..	..	16.0	

(a) Official rate; other rates are in operation for certain types of transactions.

(b) Average of daily mean telegraphic transfer rates in July 1959.

¹ Silver and cupro-nickel coins (3d., 6d., 1s., 2s., 2s. 6d.) are legal tender for payments up to £2; nickel-brass threepenny pieces up to 2 shillings; and bronze (½d. and 1d.) up to 12d.

CURRENCY EXCHANGE RATES (*contd.*)

India	Rupee	13.33
Irish Republic	Irish Pound	1.0
Italy	Lira	1,745.0
Japan	Yen	1,010.0
Malaya, Federation of	Malayan Dollar	8.57
Netherlands, The	Guilder (Florin)	10.6
New Zealand	New Zealand Pound	1.0
Nigeria, Federation of	British West African Pound	1.0
Norway	Krone	20.0
Pakistan	Pakistan Rupee	13.33
Portugal	Escudo	80.0
Rhodesia and Nyasaland, Federa- tion of	Rhodesian Pound	1.0
Singapore	Malayan Dollar	8.57
South Africa, Union of	South African Pound	1.0
Spain	Peseta	168.0
Sweden	Krona	14.5
Switzerland	Swiss Franc	12.12 (b)
Turkey	Turkish Pound	7.87 (a)
United States of America	Dollar	2.80
Union of Soviet Socialist Re- publics	Rouble	11.20 (a)
West Indies, The		
Jamaica	Jamaican Pound	1.0
Barbados, Leeward Islands, Trinidad and Tobago, and Windward Islands	British West Indian Dollar	4.80

(a) Official rate; other rates are in operation for certain types of transactions.

(b) Average of daily mean telegraphic transfer rates in July 1959.

BRITISH WEIGHTS AND MEASURES AND THEIR METRIC EQUIVALENTS

MEASURES OF LENGTH

1 inch	=	2.54 centimetres
12 inches	=	1 foot = 30.48 centimetres
3 feet	=	1 yard = 0.914 metre
1,760 yards	=	1 mile = 1.609 kilometres

MEASURES OF AREA

1 square inch	=	6.451 square centimetres
144 square inches	=	1 square foot = 929.03 square centimetres
9 square feet	=	1 square yard = 0.836 square metre
4,840 square yards	=	1 acre = 0.405 hectare
640 acres	=	1 square mile = 2.59 square kilometres

BRITISH WEIGHTS AND MEASURES AND THEIR METRIC EQUIVALENTS (*contd.*)

MEASURES OF CAPACITY

1 gill	=0.142 litre	2 gallons	=1 peck	= 9.092 litres
4 gills	=1 pint =0.568 litre	4 pecks	=1 bushel	=36.37 litres
2 pints	=1 quart =1.136 litres	8 bushels	=1 quarter	= 2.909 hectolitres
4 quarts	=1 gallon=4.546 litres			

MEASURES OF WEIGHT (AVOIRDUPOIS)

	1 ounce (oz.)	=28.350 grams
16 oz.	=1 pound (lb.)	= 0.454 kilogram
14 lb.	=1 stone (st.)	= 6.35 kilograms
28 lb.	=1 quarter (qtr.)	=12.7 kilograms
4 quarters (112 lb.)	=1 hundredweight (cwt.)	=50.8 kilograms
20 cwt. (2,240 lb.)	=1 long ton	= 1.016 metric tons
2,000 lb.	=1 short ton	= 0.907 metric ton

DOUBLE CONVERSION TABLES FOR WEIGHTS AND MEASURES

(Note: the central figures represent either of the two columns beside them, as the case may be—e.g., 1 centimetre =0.394 inch, and 1 inch =2.540 centimetres.)

Centi- metres			Inches			Metres			Yards			Kilo- metres			Miles			Hec- tares			Acres		
2.540	1	0.394	0.914	1	1.094	1.609	1	0.621	0.404	1	2.471	5.080	2	0.787	1.829	2	2.187	3.219	2	1.243	0.809	2	4.942
7.620	3	1.181	2.743	3	3.281	4.828	3	1.864	1.214	3	7.413	10.160	4	1.575	3.658	4	4.374	6.437	4	2.485	1.619	4	9.884
12.700	5	1.969	4.572	5	5.468	8.047	5	3.107	2.023	5	12.355	15.240	6	2.362	5.486	6	6.562	9.656	6	3.728	2.428	6	14.826
17.780	7	2.756	6.401	7	7.655	11.266	7	4.350	2.833	7	17.298	20.320	8	3.150	7.315	8	8.749	12.875	8	4.971	3.237	8	19.769
22.860	9	3.543	8.230	9	9.843	14.484	9	5.592	3.642	9	22.240	25.400	10	3.937	9.144	10	10.936	16.094	10	6.214	4.047	10	24.711
Kilo- grams			Av. Pounds			Litres			Pints			Litres			Gallons			Hecto- litres per Hectare			English Bushels per Acre		
0.454	1	2.205	0.568	1	1.760	4.546	1	0.220	0.898	1	1.113	0.907	2	4.409	1.136	2	3.520	9.092	2	0.440	1.796	2	2.226
1.361	3	6.614	1.705	3	5.279	13.638	3	0.660	2.695	3	3.340	1.814	4	8.818	2.273	4	7.039	18.184	4	0.880	3.593	4	4.453
2.268	5	11.023	2.841	5	8.799	22.730	5	1.100	4.491	5	5.566	2.722	6	13.228	3.409	6	10.559	27.276	6	1.320	5.389	6	6.679
3.175	7	15.432	3.978	7	12.319	31.822	7	1.540	6.287	7	7.793	3.629	8	17.637	4.546	8	14.078	36.368	8	1.760	7.186	8	8.906
4.082	9	19.842	5.114	9	15.838	40.914	9	1.980	8.084	9	10.019	4.536	10	22.046	5.682	10	17.598	45.460	10	2.200	8.982	10	11.132

THERMOMETRICAL TABLE

	<i>Fahrenheit</i>	<i>Centigrade</i>	<i>Réaumur</i>
Water boils	212°	100°	80°
Water freezes	32°	0°	0°
Blood heat	98·4°	36·9°	29·5°

To convert:

°Fahrenheit into °Centigrade: subtract 32, then multiply by $\frac{5}{9}$.

°Centigrade into °Fahrenheit: multiply by $\frac{9}{5}$, then add 32.

°Fahrenheit into °Réaumur: subtract 32, then multiply by $\frac{4}{9}$.

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In the United States, equivalent free material can be supplied by British Information Services, 45 Rockefeller Plaza, New York 20, N.Y.

Certain reference pamphlets produced by the Central Office of Information can be purchased from Her Majesty's Stationery Office and its agents overseas. These pamphlets are listed here with their respective prices (postage extra, as on all H.M.S.O. publications, if ordered direct).

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FINER, S. E. A Primer of Public Administration	<i>Muller</i>	1950		
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LEE, Sir FRANK. Home and Overseas Responsibilities of the Board of Trade (Stamp Memorial Lecture 1958)	<i>Athlone Press</i>	1959	3	6
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New Whitehall Series For the Royal Institute of Public Administration				
The Colonial Office, by Sir Charles Jeffries	<i>Allen & Unwin</i>	1956	18	0
The Foreign Office, by Lord Strang and others	<i>Allen & Unwin</i>	1955	18	0
The Home Office, by Sir Frank Newsam	<i>Allen & Unwin</i>	1954	18	0
The Ministry of Pensions and National Insurance, by Sir Geoffrey King	<i>Allen & Unwin</i>	1958	18	0
The Ministry of Transport and Civil Aviation, by Sir Gilmour Jenkins	<i>Allen & Unwin</i>	1959	21	0
The Ministry of Works, by Sir Harold Emmerson	<i>Allen & Unwin</i>	1956	15	0
The Scottish Office, by Sir David Milne	<i>Allen & Unwin</i>	1958	21	0
Know Your Ministry: A Description of Government Departments Whose Operations Affect the Conduct of Business	<i>Europa Publications</i>	1959	25	0
Government Administration in Wales	Cmnd 631 <i>HMSO</i>	1959	1	9
Handbook on Scottish Administration	<i>HMSO</i>	1956	2	6
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How Northern Ireland is Governed: Central and Local Government in Northern Ireland, by Hugh Shearman	<i>Belfast, HMSO</i>	1951		6
Scottish Administration	Reference Paper R.3363 COI	1956		free*
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BRIDGES, Sir EDWARD [now Lord]. Portrait of a Profession: The Civil Service Tradition	<i>Cambridge University Press</i>	1950	3	6

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MONCK, BOSWORTH. <i>How the Civil Service Works</i>	<i>Phoenix House</i>	1952	18 0
WHEARE, K. C. <i>The Civil Service in the Constitution</i>	<i>Athlone Press</i>	1954	25 0
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The British Civil Service	Reference Paper R.4123 <i>COI</i>	1959	free*

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CHESTER, D. N. <i>Central and Local Government: Financial and Administrative Relations</i>	<i>Macmillan</i>	1951	30 0
CLARKE, J. J. <i>The Local Government of the United Kingdom</i> . 15th rev. edn	<i>Pitman</i>	1956	30 0
——— <i>Outlines of Local Government of the United Kingdom</i> . 18th rev. edn	<i>Pitman</i>	1957	20 0
The Corporation of London: Its Origin, Constitution and Duties	<i>Oxford University Press</i>	1950	
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HART, WILLIAM O. <i>Introduction to the Law of Local Government and Administration</i> . 6th rev. edn	<i>Butterworth</i>	1957	45 0
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MORRISON, HERBERT. <i>How London is Governed</i> . 2nd edn	<i>James Barrie</i>	1949	8 6
SCHOFIELD, A. N. <i>Local Government Elections</i> . 3rd edn	<i>Shaw</i>	1954	65 0
WARREN, J. H. <i>The Local Government Service</i>	<i>Allen & Unwin</i>	1952	18 0
——— <i>The English Local Government System</i> . 3rd edn	<i>Allen & Unwin</i>	1953	15 0
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For 1958 Cmd 737	<i>HMSO</i>	1959	10 6
Local Government Finance (England and Wales) General Grant Order, 1958	<i>HMSO</i>	1958	9
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COI Reference Pamphlet RF.P4154	<i>HMSO</i>	1959	2 6
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ALLEN, <i>Sir</i> C. K. Administrative Jurisdiction	<i>Stevens</i>	1956	15	0
——— Law and Orders	<i>Stevens</i>	1956	42	0
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——— Children and the Law	<i>Penguin Books</i>	1959	3	6
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ELKIN, WINIFRED A. The English Penal System	<i>Penguin Books</i>	1957	3	6
FOX, <i>Sir</i> LIONEL W. English Prison and Borstal Systems	<i>Routledge</i>	1952	32	0
FRY, MARGERY. Aims of the Law	<i>Gollancz</i>	1951	8	6
GRÜNHUT, M. Juvenile Offenders Before the Courts	<i>Oxford University Press</i>	1956	25	0
KING, JOAN F. S., <i>Editor</i> . The Probation Service	<i>Butterworth</i>	1958	25	0
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Prisons in Scotland For 1958 Cmnd 765	<i>HMSO</i>	1959	3	0
Penal Practice in a Changing Society Cmnd 645	<i>HMSO</i>	1959	2	6
Prediction Methods in relation to Borstal Training, by Dr. Hermann Mannheim and Leslie T. Wilkins	<i>HMSO</i>	1955	17	6

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Report of the Committee on Discharged Prisoners' Aid Societies	Cmd 8879 <i>HMSO</i>	1953	3	0
Report of the Royal Commission on Capital Punishment 1949-53	Cmd 8932 <i>HMSO</i>	1953	12	6
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Annual Reports				
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H.M. Inspector of Constabulary, Scotland				
For 1958 Cmnd 770	<i>HMSO</i>	1959	1	0
H.M. Inspectors of Constabulary (Counties and Boroughs in England and Wales)	For 1957-58 <i>HMSO</i>	1959	1	3
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The Police Service in Britain				
Reference Pamphlet RF.P.4164	<i>COI</i>	1959	free*	

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EYRE, FRANK and HADFIELD, E. C. R. The Fire Service To-day. 2nd edn	<i>Oxford University Press</i>	1953	9	6
Annual Reports				
Fire Research Board	For 1958 <i>HMSO</i>	1959	5	0
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Fire Services in Britain	Reference Paper R.2915 <i>COI</i>	1955	free*	

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Brassey's Annual: The Armed Forces Year Book 1958, edited by Rear-Admiral H. G. Thursfield	<i>Clowes</i>	1958	63	0
Jane's All the World's Aircraft 1958-59, edited by Leonard Bridgman	<i>Sampson Low</i>	1958	105	0
Jane's Fighting Ships 1958-59, edited by Raymond Blackman	<i>Sampson Low</i>	1958	105	0
KEMP, Lt.-Cdr. P. K. Fleet Air Arm	<i>Jenkins</i>	1954	16	0

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KEMP, <i>Lt.-Cdr.</i> P. K. H.M. Destroyers	<i>Jenkins</i>	1956	16	0
LEWIS, MICHAEL. The History of the British Navy	<i>Allen & Unwin</i>	1959	25	0
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SHEPPARD, E. W. A Short History of the British Army. 4th edn	<i>Constable</i>	1950	30	0
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THETFORD, OWEN. Aircraft of the Royal Air Force 1918-58	<i>Putnam</i>	1958	50	0
—— British Naval Aircraft 1912-58	<i>Putnam</i>	1958	50	0
Annual Estimates				
Air Estimates 1959-60	<i>HMSO</i>	1959	13	0
Memorandum by the Secretary of State for Air	Cmnd 673 <i>HMSO</i>	1959	2	0
Army Estimates 1959-60	<i>HMSO</i>	1959	11	0
Memorandum of the Secretary of State for War	Cmnd 669 <i>HMSO</i>	1959	2	6
Ministry of Defence Estimate 1959-60	<i>HMSO</i>	1959	1	3
Navy Estimates 1959-60	<i>HMSO</i>	1959	16	0
Statement of the First Lord of the Admiralty	Cmnd 674 <i>HMSO</i>	1959	1	6
Defence: Outline of Future Policy	Cmnd 124 <i>HMSO</i>	1957	1	0
Progress of the Five Year Defence Plan	Cmnd 662 <i>HMSO</i>	1959	9	
Defence Statistics 1959-60	Cmnd 661 <i>HMSO</i>	1959	9	
Call Up of Men to the Forces, 1957-60	Cmnd 175 <i>HMSO</i>	1957	4	
Central Organisation for Defence	Cmnd 476 <i>HMSO</i>	1958	6	
Official Histories of the Second World War:				
United Kingdom: Civil Series.				
Civil Defence, by T. H. O'Brien	<i>Longmans & HMSO</i>	1955	37	6
Civil Defence. Manual of Basic Training [<i>pamphlets</i>]	<i>HMSO</i>	1949	1	0
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Manual of Civil Defence. Vol. I. Pamphlet No. 1. Nuclear Weapons	<i>HMSO</i>	1956	2	6
The Future Organisation of the Army	Cmnd 230 <i>HMSO</i>	1957	6	

IV. SOCIAL WELFARE

State and Voluntary Services

FAMILY WELFARE ASSOCIATION. Guide to the Social Services, 1957-58. A Year Book of Information respecting the Statutory and Voluntary Means of Assistance. 48th edn	<i>Staples Press</i>	1958	5	0
HALL, M. PENELOPE. The Social Services of Modern England. 4th rev. edn	<i>Routledge</i>	1959	28	0
HAYNES, A. H. The Practitioner's Handbook to the Social Services	<i>Wright & Sons</i>	1955	9	6

KUENSTLER, P. H. K., <i>Editor</i> . Social Group Work in Great Britain <i>Faber & Faber</i>	1955	12	6	s. d.
MORRIS, C., <i>Editor</i> . Social Case-Work in Great Britain. 2nd edn <i>Faber & Faber</i>	1955	15	0	
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NATIONAL COUNCIL OF SOCIAL SERVICE. Voluntary Social Services: Handbook of Information and Directory of Organisations. rev. edn <i>NCSS</i>	1957	10	6	
—— Public Social Services: Handbook of Information. 10th edn <i>NCSS</i>	1955	10	6	
TITMUSS, R. M. Essays on the Welfare State <i>Allen & Unwin</i>	1958	20	0	
Official Histories of the Second World War: United Kingdom: Civil Series. Problems of Social Policy, by R. M. Titmuss <i>Longmans & HMSO</i>	1950	25	0	
—— Studies in the Social Services, by S. M. Ferguson and H. Fitzgerald <i>Longmans & HMSO</i>	1954	22	6	
Report of the Working Party on Social Workers in the Local Authority Health and Welfare Services <i>HMSO</i>	1959	15	0	
The Story of the W.V.S. <i>HMSO</i>	1959	3	6	
Social Services in Britain COI Reference Pamphlet RF.P.4296 <i>HMSO</i>	1959	5	0	
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MARSH, DAVID C. National Insurance and Assistance in Great Britain <i>Pitman</i>	1951	20	0	
RATHBONE, ELEANOR. Family Allowances <i>Allen & Unwin</i>	1949	15	0	
SHENFIELD, B. E. Social Policies for Old Age <i>Routledge</i>	1957	25	0	
Annual Reports Ministry of Pensions and National Insurance For 1957 Cmnd 493 <i>HMSO</i>	1958	8	0	
National Assistance Board For 1958 Cmnd 781 <i>HMSO</i>	1959	4	6	
National Assistance Board for Northern Ireland For 1958 <i>Belfast, HMSO</i>	1959	1	6	
War Pensioners For 1957 <i>HMSO</i>	1958	5	0	
Children in the Care of Local Authorities in England and Wales, March 1958 <i>Annual Statistics</i> Cmnd 632 <i>HMSO</i>	1959	9		
Everybody's Guide to National Insurance. rev. edn <i>HMSO</i>	1958	6		
Improvements in National Assistance Cmnd 782 <i>HMSO</i>	1959	6		
National Insurance Bill 1959: Report of the Government Actuary on the Financial Provisions of the Bill Cmnd 629 <i>HMSO</i>	1959	1	0	
Reports by the Government Actuary on the First Quinquennial Review National Insurance Act, 1946 <i>HMSO</i>	1954	2	6	
National Insurance (Industrial Injuries) Act, 1946 <i>HMSO</i>	1955	1	3	
Social Insurance and Allied Services [Beveridge Report] Cmd 6404 <i>HMSO</i>	1942	12	6	
Work of the Children's Department of the Home Office <i>HMSO</i>	1955	8	6	

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Part I. 1. National Health Service.

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ALEXANDER, W. P. Education in England: The National System, How It Works	<i>Newnes</i>	1954	12 6
ARMFELT, R. The Structure of English Education	<i>Cohen & West</i>	1955	12 6
BRITISH COUNCIL. Higher Education in the United Kingdom: A Handbook for Students from Overseas. rev. edn	<i>Longmans</i>	1956	5 0
COTGROVE, STEPHEN F. Technical Education and Social Change	<i>Allen & Unwin</i>	1958	25 0
CURTIS, S. J. History of Education in Great Britain. 4th edn	<i>University Tutorial Press</i>	1957	21 0
DENT, H. C. British Education. 3rd edn			
For the British Council	<i>Longmans</i>	1955	2 0
——— Growth in English Education, 1946-1952	<i>Routledge</i>	1954	16 0
——— Editor. Year Book of Technical Education and Careers in Industry	For 1959 <i>Black</i>	1959	30 0
DONGERKERY, S. R. Universities in Britain	<i>Oxford University Press</i>	1953	10 6
LESTER SMITH, W. O. Education: An Introductory Survey	<i>Penguin Books</i>	1957	3 6
——— Education in Great Britain. 3rd edn	<i>Oxford University Press</i>	1958	7 6
NATIONAL INSTITUTE OF ADULT EDUCATION. Adult Education in the United Kingdom: A Directory of Organisations	<i>National Institute of Adult Education</i>	1956	5 0
PEERS, R. A. Adult Education	<i>Routledge</i>	1958	35 0
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Ministry of Education			
Education in 1958	Cmnd 777 <i>HMSO</i>	1959	12 0
Ministry of Education for Northern Ireland, 1957-58			
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Scottish Education Department			
Education in Scotland in 1958	Cmnd 740 <i>HMSO</i>	1959	6 0
Education in 1900-1950	Cmd 8244 <i>HMSO</i>	1951	12 0
Education in Scotland: The Next Step	Cmnd 603 <i>HMSO</i>	1958	6 0
Further Education (Ministry of Education Pamphlet No. 8)	<i>HMSO</i>	1947	6 0
Further Education: A Report of the Advisory Council on Education in Scotland	Cmd 8454 <i>HMSO</i>	1952	5 0
Further Education for Commerce. Report of the Advisory Committee	<i>HMSO</i>	1959	2 6
The Health of the School Child. Report of the Chief Medical Officer of the Ministry of Education for 1956 and 1957 and Fifty Years of the School Health Service	<i>HMSO</i>	1959	10 6
Junior Secondary Education [Scotland]	<i>HMSO</i>	1955	5 0

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The New Secondary Education (Ministry of Education Pamphlet No. 9)	<i>HMSO</i>	1947	3	6
Public Education in Scotland. 3rd edn	<i>HMSO</i>	1958	3	6
Report of the Committee on Organisation and Finance of Adult Education	<i>HMSO</i>	1954	2	6
Report of the Working Party on the Curriculum of the Senior Secondary School (Scotland)	<i>HMSO</i>	1959	3	6
Scope and Content of the Three Year Course of Teacher Training (Sixth Report of the National Advisory Council on the Training and Supply of Teachers)	<i>HMSO</i>	1957		9
Secondary Education for All: A New Drive	Cmdnd 604 <i>HMSO</i>	1959		9
The Supply of Teachers in the 1960s	<i>HMSO</i>	1958		9
Technical Education	Cmd 9703 <i>HMSO</i>	1956	1	6
The Training of Teachers (Ministry of Education Pamphlet No. 34)	<i>HMSO</i>	1957	1	9
University Grants Committee				
Annual Return from Universities and University Colleges				
For 1957-58	Cmdnd 832 <i>HMSO</i>	1959	5	0
University Development 1952-57	Cmdnd 534 <i>HMSO</i>	1958	5	6
Education in Britain				
COI Reference Pamphlet RF.P.3798	<i>HMSO</i>	1958	3	6
— Supplement 1959	<i>COI</i>	1959		free*
Education and Training for Industry and Commerce in Britain	Reference Paper R.4261 <i>COI</i>	1959		free*
Students from the United Kingdom Dependencies in the United Kingdom and the Irish Republic	Reference Paper R.4186 <i>COI</i>	1959		free*
Technological Education in Britain				
COI Reference Pamphlet RF.P.4265	<i>HMSO</i>	1959		not yet priced
Universities in Britain	Reference Paper R.4124 <i>COI</i>	1959		free*
Youth Services				
BREW, J. MACALISTER. Youth and Youth Groups	<i>Faber & Faber</i>	1957	18	0
EAGER, W. McG. Making Men: The History of Boys' Clubs and Related Movements in Great Britain				
<i>University of London Press</i>		1953	20	0
JEPHCOTT, PEARL. Some Young People	<i>Allen & Unwin</i>	1954	12	6
JORDAN, G. W. and FISHER, E. M. Self-Portrait of Youth	<i>Heinemann</i>	1955	12	6
KUENSTLER, P. H. K., <i>Compiler</i> . Youth Work in England: Extracts from Ministry of Education and other publications relating to Statutory and Voluntary Youth Work				
<i>University of London Press</i>		1954	4	0
Citizens of To-morrow: A Study of Influences Affecting the Upbringing of Young People				
For King George's Jubilee Trust	<i>Odhams</i>	1955	3	0
— Progress Report	<i>The Trust</i>	1958		free
Purpose and Content of the Youth Service	<i>HMSO</i>	1945		4
Youth Services in Britain [<i>prepared by COI for the Foreign Office</i>]	<i>HMSO</i>	1959		free

Youth Services in Britain	Reference Paper R.4200 COI	1959	s. d. free*
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V. HOUSING AND PLANNING

Annual Report

Ministry of Housing and Local Government

For 1958 Cmnd 737 HMSO 1959 10 6

Housing

ASHWORTH, HERBERT. Housing in Great Britain	<i>Skinner</i>	1957	7 6
Councils and their Houses: Management of Estates	<i>HMSO</i>	1959	2 6
Flats and Houses 1958: Design and Economy	<i>HMSO</i>	1958	10 0
Houses: The Next Step	Cmd 8996 <i>HMSO</i>	1953	9
Housing in England and Wales: 1951 Census Housing Report	<i>HMSO</i>	1956	60 0
Housing Manual 1949	<i>HMSO</i>	1949	3 6
——— Supplement. Housing for Special Purposes	<i>HMSO</i>	1951	2 0
——— Supplement. Houses 1952	<i>HMSO</i>	1952	1 0
——— Supplement. Houses 1953	<i>HMSO</i>	1953	3 0
Housing Policy, Scotland	Cmd 8997 <i>HMSO</i>	1953	6
Housing Return, England and Wales	<i>Quarterly Cmnd Paper HMSO</i>		6
Housing Return, Scotland	<i>Quarterly Cmnd Paper HMSO</i>		1 3
The Rent Act and You			
Questions and Answers for Landlord and Tenant [England and Wales]	<i>HMSO</i>	1957	6
A Simple Guide for Scotland	<i>HMSO</i>	1957	6
Housing in Britain [<i>under revision</i>]			
Reference Pamphlet RF.P.2797 COI		1954	free*

Town and Country Planning

ABERCROMBIE, Sir PATRICK. Town and Country Planning. 2nd edn	<i>Oxford University Press</i>	1943	7 6
ASHWORTH, WILLIAM. The Genesis of Modern British Town Planning	<i>Routledge</i>	1954	21 0
BROWN, H. J., <i>Editor</i> . Practical Points on Planning Law	<i>Sweet & Maxwell</i>	1951	16 6
CROWE, SYLVIA. Tomorrow's Landscape	<i>Architectural Press</i>	1956	21 0
GIBBERD, FREDERICK. Town Design. 2nd edn	<i>Architectural Press</i>	1953	73 6
HEAP, DESMOND. An Outline of Planning Law. 2nd edn	<i>Sweet & Maxwell</i>	1955	25 0
HOWARD, EBENEZER. Garden Cities of To-morrow. [<i>New edn of To-morrow: A Peaceful Path to Real Reform, first published in 1898</i>]	<i>Faber & Faber</i>	1946	8 6
KEEBLE, LEWIS. Principles and Practice of Town and Country Planning	<i>Estates Gazette</i>	1952	47 6
LICHFIELD, N. Economics of Planned Development	<i>Estates Gazette</i>	1956	47 6

			s.	d.
NICHOLSON, E. M. Britain's Nature Reserves	<i>Country Life</i>	1958	30	0
TOWN AND COUNTRY PLANNING ASSOCIATION. Town and Country Planning <i>Monthly</i>	<i>T and CPA</i>		2	0
Annual Reports				
Development Corporations of the New Towns				
England and Wales	For 1957-58 <i>HMSO</i>	1958	22	0
Scotland	For 1957-58 <i>HMSO</i>	1958	7	0
National Parks Commission	For 1957-58 <i>HMSO</i>	1958	5	6
Nature Conservancy	For 1957-58 <i>HMSO</i>	1958	6	6
First Ten Years: Report of the Nature Conservancy	<i>HMSO</i>	1959	1	6
New Towns in Britain	<i>COI</i>	1959		free
The New Towns Grow [<i>prepared by the Ministry of Housing and Local Government and COI</i>]	<i>COI</i>	1957		free
Town and Country Planning in Britain				
COI Reference Pamphlet RF.P.4178	<i>HMSO</i>	1959		not yet priced

VI. THE CHURCHES

BAPTIST UNION. Baptist Handbook: edited and published under the direction of the Council of the Baptist Union of Great Britain and Ireland	For 1959 <i>Carey Kingsgate Press</i>	1959	17	6
Catholic Directory, 1959	<i>Burns, Oates & Washbourne</i>	1959	18	0
CHURCH ASSEMBLY. Report by the Board of Social Responsibility on the Task of the Church in relation to Industry	<i>Church Information Office</i>	1959	1	6
CHURCH OF ENGLAND. Official Yearbook of the National Assembly of the Church of England	For 1959 For the Church Assembly, <i>Society for Promoting Christian Knowledge</i>	1958		
CHURCH OF IRELAND. The Irish Church Directory and Year Book	For 1959 <i>Church of Ireland Printing & Publishing Company</i>	1959	10	0
CHURCH OF SCOTLAND. Year Book	For 1960 <i>Church of Scotland Committee of Publications</i>	1959	5	0
CHURCH IN WALES. Official Handbook 1959	<i>Representative Body of the Church in Wales, Cardiff</i>	1959	15	0
CONGREGATIONAL UNION OF ENGLAND AND WALES. Congregational Year Book	For 1959 <i>Independent Press</i>	1959	42	0
CONGREGATIONAL UNION OF SCOTLAND. Year Book	For 1959-60 <i>Congregational Union of Scotland</i>	1959	3	0
EPISCOPAL CHURCH IN SCOTLAND. The Scottish Episcopal Church Year Book and Directory	For 1959-60 <i>Representative Church Council of the Episcopal Church in Scotland</i>	1959	8	6
The Lambeth Conference, 1958 ¹	<i>Society for Promoting Christian Knowledge</i>	1958	7	6
MAYFIELD, GUY. The Church of England	<i>Oxford University Press</i>	1958	18	0

¹ Also in an abridged edition, price 1s. 6d.

			s.	d.
METHODIST CHURCH. Minutes of the Annual Conference of the Methodist Church, 1959	<i>Methodist Publishing House</i>	1959	15	0
PRESBYTERIAN CHURCH OF ENGLAND. Official Handbook				
For 1959-60	<i>Presbyterian Church of England</i>	1959	5	0
PRESBYTERIAN CHURCH OF WALES. Year Book				
For 1959	<i>Presbyterian Church of Wales</i>	1959	3	6
SALVATION ARMY. Year Book				
For 1959	<i>Salvationist Publishing & Supplies</i>	1959		
UNITARIAN AND FREE CHRISTIAN CHURCHES. Year Book of the General Assembly				
For 1959	<i>Lindsey Press</i>	1959	5	0
UNITED FREE CHURCH OF SCOTLAND. Handbook				
For 1959	<i>United Free Church of Scotland</i>	1959	2	6

VII. PROMOTION OF THE SCIENCES AND THE ARTS

The Sciences

BAILEY, Sir EDWARD. Geological Survey of Great Britain				
	<i>Thomas Murby</i>	1952	22	6
BRITISH COUNCIL. Scientific and Learned Societies of Great Britain: A Handbook compiled from Official Sources. 59th edn	<i>Allen & Unwin</i>	1958	35	0
CARDWELL, D. S. L. The Organisation of Science in England				
	<i>Heinemann</i>	1957	18	0
CROWTHER, J. G. Nuclear Energy in Industry	<i>Newnes</i>	1956	17	6
DUKES, J. D. Man-Made Sun: The Story of Zeta				
	<i>Abelard-Schuman</i>	1959	10	6
EDWARDS, R. S. Co-operative Industrial Research	<i>Pitman</i>	1950	20	0
HORDER, Lord. Fifty Years of Medicine	<i>Duckworth</i>	1953	5	0
HUDSON, DEREK and LUCKHURST, K. W. The Royal Society of Arts, 1754-1954	<i>John Murray</i>	1954	30	0
JARAMILLO-ARANGO, Dr. JAIME. The British Contribution to Medicine	<i>Livingstone</i>	1953	25	0
JAY, K. E. B. Atomic Energy Research at Harwell				
	<i>Butterworth's Scientific Publications</i>	1955	5	0
Calder Hall: The Story of Britain's First Atomic Power Station	<i>Methuen</i>	1956	5	0
MARTIN, T. The Royal Institution				
For the British Council	<i>Longmans</i>	1948		
ROYAL SOCIETY OF LONDON. Report of Empire Scientific Conference 1946. 2 vols.	<i>Cambridge University Press</i>	1948	42	0
— The Year Book of the Royal Society of London, 1959				
	<i>Royal Society</i>	1959	21	0
TURRILL, W. B. The Royal Botanic Gardens, Kew, Past and Present	<i>Jenkins</i>	1959	25	0
Combining for Research: The Work of the Industrial Research Associations in the Government Scheme	<i>DSIR</i>	1956	free	
Annual Reports				
Advisory Council on Scientific Policy				
For 1957-58 Cmnd 597	<i>HMSO</i>	1958	1	3
Agricultural Research Council				
For 1957-58 Cmnd 750	<i>HMSO</i>	1959	8	0

Annual Reports (<i>contd.</i>)		s.	d.
Atomic Energy Authority Fifth Report			
For 1958-59	<i>HMSO</i>	1959	5 0
Medical Research Council For 1957-58	Cmnd 792 <i>HMSO</i>	1959	13 0
Meteorological Office For 1957-58	<i>HMSO</i>	1958	3 6
National Physical Laboratory For 1958	<i>HMSO</i>	1959	8 0
National Research Development Corporation			
For 1957-58	<i>HMSO</i>	1958	1 6
Research Council of the Department of Scientific and Industrial Research			
For 1958	Cmnd 739 <i>HMSO</i>	1959	3 6
Research for Industry, 1958	<i>HMSO</i>	1959	7 6
Hazards to Man of Nuclear and Allied Radiation (Medical Research Council Report)	Cmd 9780 <i>HMSO</i>	1956	5 6
Jubilee Book of the National Physical Laboratory, by John Langdon-Davies	<i>HMSO</i>	1951	4 0
Science Museum: The First Hundred Years	<i>HMSO</i>	1957	15 0
Scientific Research in British Universities, 1958-59	<i>HMSO</i>	1959	25 0
Nuclear Energy in Britain			
COI Reference Pamphlet RF.P.4192	<i>HMSO</i>	1959	<i>not yet priced</i>
Some British Records and Achievements in Science, Industry and Technology			
Reference Booklet RF.P.3984	<i>COI</i>	1959	free*

The Arts

ARTS COUNCIL OF GREAT BRITAIN. The First Ten Years.			
Eleventh Annual Report 1955-56	<i>Arts Council</i>	1956	2 6
— A New Pattern of Patronage. Thirteenth Annual Report 1957-58	<i>Arts Council</i>	1958	2 6
BRITISH COUNCIL. Annual Report 1957-58	<i>British Council</i>	1958	1 0
CALOUSTE GULBENKIAN FOUNDATION. Help for the Arts: Report to the Foundation	<i>The Foundation</i>	1959	3 0
CARNEGIE UNITED KINGDOM TRUST. Annual Report			
Dunfermline, <i>Carnegie United Kingdom Trust</i>		1958	free
Government and the Arts in Britain	<i>HMSO</i>	1958	2 0

Visual Arts

Directory of Museums and Art Galleries in the British Isles			
<i>Museums Association</i>	1948	21	0
GARDNER, A. H. Outline of English Architecture. 3rd edn			
<i>Batsford</i>	1949	15	0
HENDY, Sir PHILIP. The National Gallery, London			
<i>Thames & Hudson</i>	1955	126	0
LAMB, Sir WALTER. The Royal Academy. 2nd edn	<i>Bell</i>	1951	
LEES-MILNE, JAMES, <i>Editor</i> . The National Trust: A Record of Fifty Years' Achievement, 1895-1945. 3rd edn	<i>Batsford</i>	1948	
Museum Calendar <i>Annual</i>	<i>Museums Association</i>	1959	6 0
The National Gallery, July 1956-June 1958	<i>National Gallery</i>	1958	10 0
READ, Sir HERBERT. Contemporary British Art	<i>Penguin Books</i>	1951	
ROTHENSTEIN, Sir JOHN. An Introduction to English Painting			
<i>Cassell</i>	1952	21	0
— Modern English Painters: Lewis to Moore			
<i>Eyre & Spottiswoode</i>	1956	35	0

			s.	d.
Who's Who in Art. 9th edn	<i>Art Trade Press</i>	1958	60	0
Annual Reports				
Ancient Monuments Boards for England, Scotland and Wales	For 1958 <i>HMSO</i>	1959	1	6
Historic Buildings Council for England	For 1958 <i>HMSO</i>	1959	1	3
Historic Buildings Council for Scotland	For 1958 <i>HMSO</i>	1959		9
Historic Buildings Council for Wales	For 1958 <i>HMSO</i>	1959		6
Royal Fine Art Commission	For 1957 Cmnd 447 <i>HMSO</i>	1958	1	0
Tate Gallery	For 1957-58 <i>HMSO</i>	1959	4	0
Standing Commission on Museums and Galleries				
Report for 1954-58 <i>HMSO</i>		1959	4	0
<i>Literature</i>				
British National Bibliography <i>Annual</i>				
<i>The Council of the British National Bibliography</i>		1959	190	0
Library Association Year Book 1959	<i>Library Association</i>	1959	21	0
SCOTT-JAMES, R. A. Fifty Years of English Literature, 1900-1950, new edn with Postscript, 1951-55	<i>Longmans</i>	1956	21	0
The Structure of the Public Library Service in England and Wales	Cmnd 660 <i>HMSO</i>	1959	3	6
<i>Drama</i>				
FINDLATER, R. The Future of the Theatre	<i>Fabian Society</i>	1959	2	6
The Stage Year Book, 1958 <i>Annual</i>	<i>The Stage</i>	1958	12	0
Who's Who in the Theatre, edited by John Parker, 12th rev. edn	<i>Pitman</i>	1957	105	0
<i>Films</i>				
FIELD, MARY. Children and Films				
Dunfermline, <i>Carnegie United Kingdom Trust</i>		1954	10	6
MANVELL, ROGER. The Film and the Public	<i>Penguin Books</i>	1955	3	6
POLITICAL AND ECONOMIC PLANNING. The British Film Industry: A Report on the History and Organisation of the Industry	<i>PEP</i>	1952	18	0
— The British Film Industry, 1958	<i>PEP</i>	1958	5	0
ROTHA, PAUL and others. Documentary Film. 3rd edn	<i>Faber & Faber</i>	1952	42	0
Annual Reports				
British Film Fund Agency	For 1957-58 <i>HMSO</i>	1959		6
Cinematograph Films Council	For 1958-59 <i>HMSO</i>	1959		6
National Film Finance Corporation (and Statement of Accounts)	For 1958-59 Cmnd 799 <i>HMSO</i>	1959	1	3
The Cinema in Britain	Reference Paper R.3645 <i>COI</i>	1957		free*
<i>Music, Opera and Ballet</i>				
Ballet Annual 1960, edited by Arnold L. Haskell	<i>Black</i>	1959	30	0
British Federation of Music Festivals Year Book				
<i>British Federation of Music Festivals</i>		1959	6	0
CLARKE, MARY. The Sadler's Wells Ballet: A History and an Appreciation	<i>Black</i>	1955	21	0

			s.	d.
Music Book	<i>Hinrichsen</i>	1956	25	0
WALKER, ERNEST. A History of Music in England. 3rd edn	<i>Oxford University Press</i>	1952	40	0
VIII. THE NATIONAL ECONOMY				
CAIRNCROSS, A. K., <i>Editor</i> . The Scottish Economy: A Statistical Account of Scottish Life by Members of the Staff of Glasgow University	<i>Cambridge University Press</i>	1954	30	0
CLAPHAM, Sir JOHN. A Concise Economic History of Britain: From Earliest Times to 1750	<i>Cambridge University Press</i>	1949	25	0
——— An Economic History of Modern Britain. 3 vols	<i>Cambridge University Press</i>	1938	165	0
COURT, W. H. B. A Concise Economic History of Britain from 1750 to Recent Times	<i>Cambridge University Press</i>	1954	25	0
DEVONS, E. An Introduction to British Economic Statistics	<i>Cambridge University Press</i>	1956	22	6
JONES, G. P. and POOL, A. G. A Hundred Years of Economic Development in Great Britain 1840-1940. 2nd edn	<i>Duckworth</i>	1948	21	0
LEWIS, W. ARTHUR. Economic Survey 1919-1939	<i>Allen & Unwin</i>	1953	18	0
SEERS, DUDLEY. The Levelling of Incomes since 1938	<i>Blackwell</i>	1951	5	0
STAMP, L. DUDLEY and BEAVER, S. H. The British Isles: a Geographic and Economic Survey	<i>Longmans</i>	1954	46	6
WORSWICK, G. D. N. and others. The British Economy, 1945-50	<i>Oxford University Press</i>	1952	35	0
Economic Review <i>Bi-Monthly from January 1959</i>	<i>National Institute of Economic and Social Research</i>		8	0
Official Histories of the Second World War: United Kingdom: Civil Series. British War Economy, by W. K. Hancock and M. M. Gowing	<i>Longmans & HMSO</i>	1949	30	0
Annual Abstract of Statistics. No. 95, 1958	<i>HMSO</i>	1958	21	0
Council on Prices, Productivity and Incomes, First Report [Cohen Council]	<i>HMSO</i>	1958	2	0
——— Second Report	<i>HMSO</i>	1958	2	0
——— Third Report	<i>HMSO</i>	1959	2	0
Economic Survey <i>Annual from 1947</i>	<i>For 1959 Cmnd 708 HMSO</i>	1959	3	0
Economic Survey of Northern Ireland (Report prepared by K. S. Isles and N. Cuthbert)	<i>Belfast, HMSO</i>	1957	35	0
Enquiry into Household Expenditure in 1953-54	<i>HMSO</i>	1957	37	6
National Income and Expenditure of the United Kingdom 1938-46	<i>Cmd 7099 HMSO</i>	1947	1	0
1958 (prepared by the Central Statistical Office)	<i>HMSO</i>	1958	7	6
Digest of Scottish Statistics <i>Twice yearly from April 1953</i>	<i>HMSO</i>		4	0
Digest of Statistics: Northern Ireland <i>Twice Yearly from March 1954</i>	<i>Belfast, HMSO</i>		5	0
Digest of Welsh Statistics <i>Annual from 1954</i>	<i>HMSO</i>		7	6
Monthly Digest of Statistics	<i>HMSO</i>		5	0

IX. INDUSTRY

Organisation and Production

ALLEN, G. C. British Industries and their Organisation. 3rd edn	<i>Longmans</i>	1951	21	0
BRITISH STANDARDS INSTITUTION. Year Book	<i>BSI</i>	1959	15	0
BURN, DUNCAN, <i>Editor</i> . The Structure of British Industry: A Symposium. Vol. I	<i>Cambridge University Press</i>	1958	45	0
Vol. II	<i>Cambridge University Press</i>	1958	50	0
GOODMAN, L. LANDON. Man and Automation	<i>Penguin Books</i>	1957	3	6
HUTTON, GRAHAM <i>and others</i> . We Too Can Prosper: The Promise of Productivity	<i>Allen & Unwin</i>	1953	12	0
OAKLEY, C. A., <i>Editor</i> . Scottish Industry: An Account of what Scotland makes and where she makes it	<i>Scottish Council</i>	1953	25	0
POLITICAL AND ECONOMIC PLANNING. Industrial Trade Associations: Activities and Organisation	<i>Allen & Unwin</i>	1957	30	0
ROBSON, W. A. Problems of Nationalised Industry	<i>Allen & Unwin</i>	1952	25	0
Distribution of Industry	<i>Cmd 7540 HMSO</i>	1948	1	9
Report of the Monopolies and Restrictive Practices Commission. Collective Discrimination: A Report on Exclusive Dealing, Collective Boycotts, Aggregated Rebates and Other Discriminatory Trade Practices	<i>Cmd 9504 HMSO</i>	1955	3	6
Report on the Census of Production for 1954				
Introductory Notes	<i>HMSO</i>	1956	1	0
12 Volumes [<i>in progress</i>]	<i>HMSO</i>	1957	1	6
			to	
			3	6
Review of Highland Policy	<i>Cmnd 785 HMSO</i>	1959		9
Industry and Employment in Scotland and Scottish Road Report <i>Annual</i>	<i>For 1958 Cmnd 706 HMSO</i>	1959	3	6
Wales and Monmouthshire: Report on Developments and Government Action for the period 1.7.57 to 31.12.58	<i>Cmnd 684 HMSO</i>	1959	5	6
Nationalised Industries in Britain				
	<i>Reference Paper R.4298 COI</i>	1959	free*	
Productivity in the United Kingdom				
	<i>Reference Paper R.3294 COI</i>	1956	free*	

Agriculture

COOPER, D. W. Farmers' Co-operation in England				
	<i>Agricultural Co-operation Association Ltd.</i>	1954	1	0
DIGBY, MARGARET. Agricultural Co-operation in Great Britain				
	<i>Crosby Lockwood</i>	1949	6	0
FRNLE, Lord. English Farming Past and Present	<i>Longmans</i>	1936		
HIRSCH, G. P. <i>and</i> HUNT, K. E. British Agriculture: Structure and Organisation				
	<i>For the National Federation of Young Farmers' Clubs Evans</i>	1958	3	6
POLITICAL AND ECONOMIC PLANNING. Agriculture and Land Use	<i>PEP</i>	1957	2	6
SYKES, FRANK. Living from the Land	<i>Geoffrey Bles</i>	1957	21	0

			s.	d.
WATSON, Sir JAMES SCOTT and MORE, J. A. Agriculture: The Science and Practice of British Farming. 10th edn				
	<i>Oliver & Boyd</i>	1956	31	6
Official Histories of the Second World War: United Kingdom: Civil Series. Agriculture, by Keith A. H. Murray				
	<i>Longmans & HMSO</i>	1956	30	0
Agricultural Research Service	<i>HMSO</i>	1953	2	6
Agricultural Statistics, United Kingdom 1957-58	<i>HMSO</i>	1959	3	6
Annual Reports				
Animal Health Services in Great Britain For 1957	<i>HMSO</i>	1959	6	0
Department of Agriculture for Scotland				
Agriculture in Scotland 1958	<i>Cmnd 699 HMSO</i>	1959	6	0
National Food Survey Committee: Domestic Food Consumption and Expenditure 1957	<i>HMSO</i>	1959	8	6
Annual Review and Determination of Guarantees				
	<i>For 1959 Cmnd 696 HMSO</i>	1959	1	3
Crofters Commission: Report	<i>For 1958 HMSO</i>	1959	1	9
Crofting Conditions: Commission of Enquiry				
	<i>Cmnd 9091 HMSO</i>	1954	5	6
Guides to Official Sources, No. 4. Agricultural and Food Statistics	<i>HMSO</i>	1958	4	6
Horticultural Marketing, Report of the Committee on				
	<i>Cmnd 61 HMSO</i>	1957	6	0
Long-term Assurances for Agriculture	<i>Cmnd 23 HMSO</i>	1956		8
National Agricultural Advisory Service Report: The First Eight Years 1946-1954	<i>HMSO</i>	1955	3	6
Report on Agricultural Marketing Schemes				
	<i>For 1938-55 HMSO</i>	1957	5	6
Farm Incomes in England and Wales	<i>Annual</i>			
	<i>For 1956-57 HMSO</i>	1959	6	6
Farming Britain, by A. N. Duckham	<i>COI</i>	1958		free*
Rural Industries in Britain	<i>Reference Paper R.3334 COI</i>	1956		free*
Fisheries				
Fisheries Year Book and Directory 1958				
	<i>British Continental Trade Press</i>	1958	20	0
Annual Reports				
Fisheries of Scotland	<i>For 1958 Cmnd 704 HMSO</i>	1959	4	6
Herring Industry Board	<i>For 1958 Cmnd 787 HMSO</i>	1959	3	0
White Fish Authority (and Accounts) For 1958-59	<i>HMSO</i>	1959	2	6
Annual Statistical Tables				
Scottish Sea Fisheries	<i>For 1958 HMSO</i>	1959	5	0
Sea Fisheries	<i>For 1957 HMSO</i>	1958	4	0
Forestry				
CHAMPION, H. G. Forestry	<i>Oxford University Press</i>	1954	7	6
EDLIN, H. L. England's Forests	<i>Faber & Faber</i>	1958	30	0
The Forestry Commission in Scotland	<i>Forestry Commission</i>	1953		free
The Role of State, Communities and Private Enterprise in the National Forest Policy of Great Britain, by W. H. Guillebaud	<i>Forestry Commission</i>	1952		free

Statement presented by the Forestry Commission of Great Britain to the Seventh British Commonwealth Forestry Conference, Australia and New Zealand, 1957

<i>Forestry Commission</i>		1957	free
Annual Reports			
Forestry Commissioners	For 1957-58 <i>HMSO</i>	1959	5 0
Forest Research	For 1957-58 <i>HMSO</i>	1959	9 6
Britain's Forests [13 booklets]	<i>HMSO</i>	1948	6
		to	to
		1953	1 3
		1951	9
Census of Woodlands 1947-49: Summary Report	<i>HMSO</i>		
Forestry, Agriculture and Marginal Land. Report by the Natural Resources (Technical) Committee	<i>HMSO</i>	1957	4 0
Marketing of Woodland Produce, Report of Departmental Committee on	<i>HMSO</i>	1956	4 6
National Forest Park and Forestry Commission Guides [9 booklets]	<i>HMSO</i>	1946	1 6
		to	to
		1958	5 0

Fuel and Power

Capital Investment in the Coal, Gas and Electricity Industries			
<i>Annual</i>	For 1959 Cmnd 713 <i>HMSO</i>	1959	6
Ministry of Power Statistical Digest <i>Annual</i>			
	For 1958 <i>HMSO</i>	1959	37 6
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CROZIER, MARY. Broadcasting	<i>Oxford University Press</i>	1958	7 6
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Copy of a New Charter of Incorporation Granted to the BBC	<i>Cmd 8605 HMSO</i>	1952	9
Copy of the Licence and Agreement between the Postmaster General and the BBC	<i>Cmd 8579 HMSO</i>	1952	6
Copy of an Agreement Supplemental to the Licence and Agreement	<i>Cmnd 80 HMSO</i>	1957	6
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Kemsley Manual of Journalism. 2nd edn	<i>Cassell</i>	1954		
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Playfair Rugby Football	For 1958-59 <i>Playfair Books</i>	1958	7 6
Ruff's Guide to the Turf	For 1959 <i>Sporting Life</i>	1959	40 0
Records and Champions. Eagle Series	For 1959 <i>Hulton Press</i>	1959	6 0
Wisden's Cricketers' Almanack	For 1959 <i>Sporting Handbooks</i>	1959	17 6

Most of the organisations concerned with sport publish year books covering results and records of the previous season and future prospects; many weekly or monthly periodicals on sport are also published. In addition, some newspapers issue annual surveys of sport.

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